

REVIEWED Olympus OM-D E-M10 II • Pentax K-S2 • ShotBox S71 • Sigma 24mm f1.4 Art

AUSTRALIAN

NOV/DEC 2015 \$8.95 NZ \$10.99

CAMERA

FOR PHOTOGRAPHY ENTHUSIASTS

EXCLUSIVE INTERVIEW

GUY SEBASTIAN

The Singing Star Reveals His
Photographic Talent

CAMERA MAGAZINE IMAGING AWARDS 2016

All The Winners Announced Inside!

MOUNTING EXCITEMENT

Explore The Potential Of Lens Adapters



D750

I AM AWARD WINNING



Photo by Clark Little

I AM THE NIKON D750. I am professional imaging technology. Featuring a 24.3 Megapixel FX-format CMOS sensor, EXPEED 4 image processor and extendable ISO coverage from 50 to 51,200 for exceptional image quality, up to 6.5 fps continuous shooting, cinematic Full HD 1080/60p video recording, a 3.2" 1229k-dot tilting LCD monitor and built in Instant Photo Sharing. I am the freedom to create. MyNikonLife.com.au



At the heart of the image

Editor Paul Burrows
pburrows@nextmedia.com.au

Art Director Kristian Hagen

Production Editor Edgar Kramer

Advertising Traffic Diane Preece
dpreece@nextmedia.com.au
Te: 02 9901 6151

Advertising Sales Lewis Preece

**Divisional Manager & National
Advertising Sales**
Jim Preece jpreece@nextmedia.com.au

Group Editor Jez Ford

Production Manager Peter Ryman

Circulation Director Carole Jones

CAMERA SUBSCRIPTIONS

1300 361 146 or +61 2 9901 6111
Locked Bag 3355,
St Leonards NSW 1590
Subscribe online: www.avhub.com.au

Digital editions & digital back issues
for iPad & Android, PC/Mac available
through **Apple Newsstand**, **Google Play**
and www.zinio.com/camera

nextmedia

Level 6, 207 Pacific Highway,
St Leonards, NSW, 2065.
Ph: (02) 9901 6100
Fax: (02) 9901 6198
www.nextmedia.com.au

Chief Executive Officer David Gardiner
Commercial Director Bruce Duncan

Camera is published by nextmedia Pty Ltd
ACN: 128 805 970, Level 6, 207 Pacific Highway,
St Leonards, NSW, 2065 © 2015. All rights reserved.

No part of this magazine may be reproduced, in whole
or in part, without the prior permission of the publisher. Printed
by Bluestar WEB Sydney, distributed by Network Services.
The publisher will not accept responsibility or any liability for
the correctness of information or opinions expressed in the
publication. All material submitted is at the owner's risk and,
while every care will be taken nextmedia does not accept
liability for loss or damage.

Privacy Policy: We value the integrity of your personal
information. If you provide personal information through your
participation in any competitions, surveys or offers featured in
this issue of Camera, this will be used to provide the products
or services that you have requested and to improve the content
of our magazines. Your details may be provided to third parties
who assist us in this purpose. In the event of organisations
providing prizes or offers to our readers, we may pass your
details on to them. From time to time, we may use the
information you provide us to inform you of other products,
services and events our company has to offer. We may also give
your information to other organisations which may use it to
inform you about their products, services and events, unless you
tell us not to do so. You are welcome to access the information
that we hold about you by getting in touch with our privacy
officer, who can be contacted at nextmedia, Locked Bag 5555,
St Leonards, NSW 1590.

ISSN 1449-0137 © 2015



This issue's main cover
photograph is by
Guy Sebastian. In our
exclusive interview –
which begins on page
24 – the singer and
TV star explains how
his photography has
become a “creative
outlet” and how he
finds time in his hectic
schedule to pursue his
passion for portraits
and landscapes.

Camera magazine is a
member of the Technical
Image Press Association.
Visit www.tipa.com



Hasselblad XPan – why are we still
waiting for a digital equivalent?

What I'd Like For Christmas

THE RECENT NEWS that Cosina – surely
the most enigmatic of Japanese camera
makers – is ceasing production of its Voigtlander-
badged Bessa 35mm rangefinder cameras is
disappointing, but isn't necessarily the end of
the world as far as film cameras are concerned.

True, the Voigtlander cameras were close
to being the last 35mm film cameras that you
could buy brand new and not spend a small
fortune, likewise its M mount lenses. Leica –
God bless it – has committed to making its 35mm
RF cameras for as long as the sun shines, but
obviously neither the M7 nor the MP are cheap
propositions if you just want to have a dabble.
There are lots of options if you want something
quirky in film cameras – fantastic plastics,
instant print (enjoying a huge revival) and the
enduring Lomos – but if you want a *real* camera,
the choice is now a tad limited... in either 35mm
or 120 rollfilm.

With the demise of DHW Fototechnik in
Germany earlier in the year, the impressively
long lifespan of the Rolleiflex TLR finally came
to an end so if you want a new medium format
film camera, Hasselblad's H5X is really your
only choice. It's descended from the original H1
and has all the digital H5D's features, but can
be fitted with an H System rollfilm magazine
(i.e. 6x4.5cm format). However, with only the
standard waistlevel viewfinder, it's still close to
ten grand. Gulp.

OK, so what about 35mm? If you're happy
to wait a while, Nikon will build you an F6
which will be put together, mostly by hand,
by the two remaining film camera technicians
at the company's Sendai plant in Japan. The
Nikon FM10 is still also apparently available,
although this is actually built by Cosina... but
then beggars really can't be choosers (and,
incidentally, the same basic platform is shared
with the Bessas). Fujifilm's Japanese Website
is still listing the classy Klasse S and Klasse W
high-end 35mm compacts. The latter model –
with its 28mm f2.8 lens – is the more desirable,
but just how easy it is to get hold of isn't clear.
It's no longer shown in the Lomography shop's
online catalogue, for example. What you will
still find here though is the Lubitel 166+ 6x6cm
TLR which is a bit rough-and-ready, but a cut
above the plastic rollfilm cameras. Likewise
the Zenit 412LS which is a basic 35mm SLR,
but not as dreadful as its sub-US\$100 price
tag might suggest.

Yet despite this paucity of new film cameras,
digital hasn't quite plugged all the gaps. For
exactly this reason, I recently revived two
cameras that I hadn't used for ages – the
Hasselblad XPan and the Fujifilm GS645S Pro –
neither of which has a digital equivalent. It's hard

to believe there isn't a digital XPan – Hasselblad
surely missed an opportunity here – because it
wouldn't be too much of a technical challenge
to achieve... and just about every landscape
photography enthusiast would buy one. In case
you've never encountered one, the XPan records
panoramic images onto double 35mm frames
(i.e. an imaging area of 24x65 mm), but it's
comparatively compact and very convenient to
use. There were only ever three interchangeable
lenses, but in reality, the standard 45mm (which
became a 25mm in panorama mode) covered
pretty well everything. I could see Panasonic
developing a panoramic version of the Lumix
GX8 without too much difficulty which would
give you a 40 MP file (pretty much what you get
when you crop on an 80 MP '645' sensor to get
the same aspect ratio). It would still be pretty
compact and a helluva lot cheaper than an 80
MP digital medium format camera system...
the only tricky bit is making lenses with a wide
enough imaging circle to cover the double-width
MFT sensor. Over to you maybe, Leica?

The GS645S is a 6x4.5 cm rangefinder
camera so it's compact too (not to mention
lightweight), but gives an image area that's 2.7x
larger than 35mm. It's another brilliant camera
– although hugely undervalued during its time –
and its fixed EBC Fujinon 60mm f4.0 prime lens
is equivalent to 35mm, but there was also a
GS645W model with a 28mm-equivalent lens.
Now I don't suppose a digital medium format
equivalent would be cheap, but I really like the
idea of having, say, Sony's 50 MP 44x33 mm
CMOS sensor in something not too much bigger
than an Alpha 7, with a fixed 28mm-equivalent
(or maybe 24mm?) lens. It would be easy to
offer crop modes for not just a 3:1 (or 2.7:1 to
mimic the XPan) panorama, but also the 35mm
and 50mm focal lengths (similar to the Leica Q)
while maintaining pretty good image quality. The
fixed lens keeps the price and the size down,
but you still get all the benefits of the big sensor
with big pixels (such as 14 stops of dynamic
range). You want one too? I suspect there'd be a
few of us, but perhaps not enough to convince
any mainstream camera maker.

Then again, Hasselblad surprised everybody
back in 1998 with the original XPan – well, it
was 35mm for starters – so maybe there's still
an adventurous streak out there somewhere.
Here's hoping.

Paul Burrows

Paul Burrows, Editor



CONTENTS

AUSTRALIAN CAMERA MAGAZINE
NOVEMBER/DECEMBER 2015

24 PROFILE Guy Sebastian

After winning the first Australian Idol talent show in 2003, Guy Sebastian has gone on to enjoy international celebrity as a singer and TV personality. He's also a passionate photographer and, in our exclusive interview, reveals why he loves creating picture so much.

Australian Teenage Photographer Of The Year entrant Jackson Schorn from Broken Hill finds inspiration in his hometown's barren industrial landscapes.

REGULARS

6 What's New

In the headlines in this issue are Epson's new EcoTank refillable inkjet printers, Olympus's upgraded entry-level OM-D body (also tested in this issue), Canon's plans for the future (including a 120 MP D-SLR!), Panasonic's Lumix GX8, Tamron's f1.8 speed primes and more.

30 Light Work

These articles are designed to help you appreciate how professional photographers approach assignments and the techniques they use, including a few handy tricks of the trade. In this issue, Trevern Dawes is in New Zealand, waiting for the mists to clear.

78 Fujifilm Showcase 2016

The 2016 competition is now open, and we've selected the grand prize winner for 2015. Entering the Fujifilm Showcase is easy and you can do it online by submitting images to cameracomp@avhub.com.au or send us digital files on a DVD or USB drive.

80 CAMERA BUYER'S CHECKLIST D-SLRs And CSCs

Christmas is on the way so there's a great excuse to buy yourself a new camera. Here's where to start looking. Where RRP's are no longer being provided, we're quoting an average of the 'street prices' we've seen quoted over the last few weeks. It's an imprecise science so expect to encounter some variations when you go shopping.

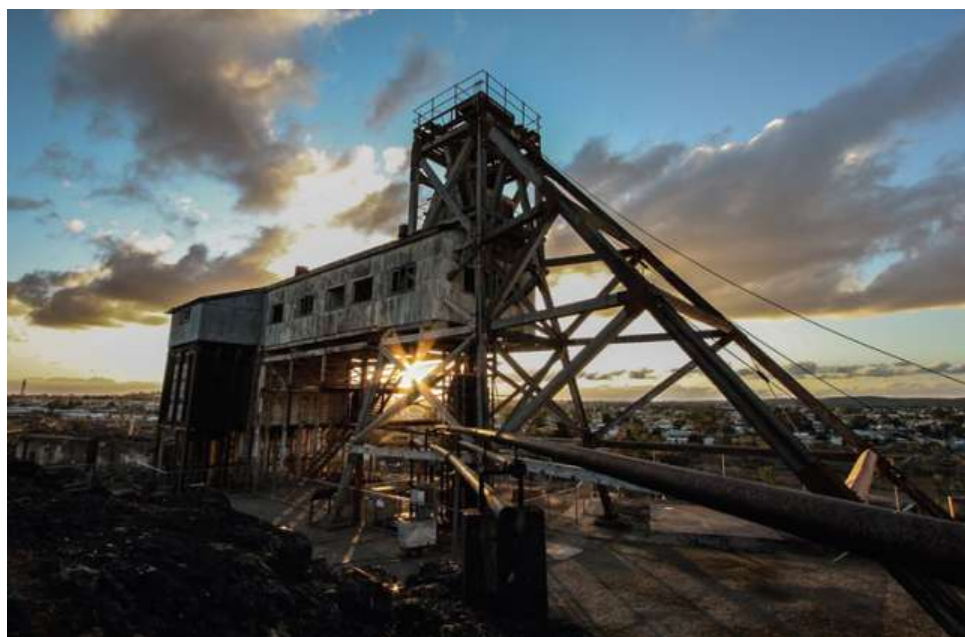
FEATURES

17 SPECIAL FEATURE 2016 Camera Magazine Imaging Awards

We started our annual design awards for imaging products way back in 1981 and they're now considered an important addition to a camera company's trophy cabinet. This year provided plenty of competition, but some products just stood out from all the rest... here they are.

52 COMPETITION Australian Teenage Photographer Of The Year

If you're aged between 13 and 19 and reckon you're pretty good behind the camera then why not show us what you can do? The third winning portfolio is in this issue, so you have just another three chances to see your best pictures in print.



74 IN PRACTICE – Mounting Up

All bets are off as far as lens mounts are concerned because now – thanks to a huge choice of mount adapters – you can fit pretty much any interchangeable lens to any camera body. Well, nearly.

ON TRIAL

32 ON TRIAL Olympus OM-D E-M10 Mark II

The original E-M10 was a gem of a camera, but Olympus has made its entry-level OM-D body even more desirable, both in terms of its classic styling and some key new features. You're going to want one.

40 ON TRIAL UniQBall Tripod Head

It's designed and manufactured in Hungary... and it's very, very clever. The UniQBall combines the best elements of the ball-type head and the tilt-pan head.

44 ON TRIAL – Pentax K-S2

Pentax – or rather parent company, Ricoh – is keeping the D-SLR flag flying high by continuing to offer exceptional value for money. The entry-level+ K-S2 is better featured than many enthusiast-level models.

54 ON TRIAL Sigma 24mm f1.4 DG HSM Art

The latest addition to Sigma's exclusive series of Art line lenses, the 24mm wide-angle delivers a stunning optical performance... but it's surprisingly affordable.

60 ON TRIAL Wide And Wonderful

If you own a Micro Four Thirds mirrorless camera, your choice of lenses is constantly expanding and here we look at some of the super-wide-angle options – two from the Olympus PRO line-up and the remarkable f0.95 speed Voigtlander 10.5mm.

68 ON TRIAL AEE ShotBox S71

The video 'actioncam' market is buzzing with activities and there's a growing choice of alternatives to the ubiquitous GoPro... such as the look-alike ShotBox S71 which shoots both 4K video and 16 megapixels JPEGs.





THE END OF THE INK CARTRIDGE?

WHILE PHOTO PRINTING isn't listed as one of the capabilities of Epson's new EcoTank range of inkjet printers, these models are noteworthy for using high-capacity ink tanks rather than replaceable cartridges. As it happens, our digital printing guru, Trevan Dawes, thinks there's no reason why Epson's EcoTank models can't work as photo printers so he's trying it out right now (watch out early next year for his test report).

Epson has already switched to high-capacity ink bags for some of its commercial-level printers and believes that both the environmental and economic aspects of throw-away cartridges – and cheap printers – is now unsustainable. The company also contends that consumers are fed up with continually replacing cartridges in their home printers, paying more for a new set of inks than they did for the machine itself.

The EcoTank printers have integrated ink tanks which are refilled via squeeze-type bottles with special non-drip feeder nozzles. Epson estimates that one set of CMYK inks will last around two years which it translates into 6500 A4-size pages in colour. This obviously refers to typical home office page content rather than images, but the figures are impressive nonetheless. There are initially four models of EcoTank printers available, all



Non-drip squeeze-type bottles containing coloured inks are used to refill ink tanks replacing inefficient and expensive cartridges.

primarily designed for home or small office usage. The line-up comprises two Expression series models – the ET-2500 (\$449) and ET-2550 (\$499) – and two WorkForce series models – the ET-4500 (\$599) and ET-4550 (\$699). Epson believes consumers will accept the higher initial purchase price of these printers in return for the considerable savings in operating costs. The EcoTank replacement ink bottles cost \$16.99 each, while an even larger capacity black ink bottle exclusively for the ET-4550 costs \$24.99 and gives a claimed 6000 A4 pages of B&W printing. It's worth noting that the cost of these printers includes a set of inks so it could be up to two years before you need to think about replacements. Usefully, the integrated tanks can be topped up at any time.

All the EcoTank printers are multi-function models so they include scanning and copying capabilities plus Wi-Fi connectivity. All but the entry-level ET-2500 model have LCD control screens while the top-of-the-line ET-4550 has auto two-sided printing and a 30-page auto document feeder.

The EcoTank printers have a one-year 'Return-to-Base' warranty, but buyers can receive an additional one-year extended warranty if they register online within 30 days of purchase. For more information visit www.epson.com.au

CANON DEBUTS WORLD-FIRST LENS TECH

CANON'S RECENTLY-ANNOUNCED

EF 35mm f1.4L II USM L Series fast wide-angle lens is the first to incorporate the company's newly-developed 'Blue Spectrum Refractive' optics.

Also a world first, the 'BR Optics' technology employs a special organic optical material which has been engineered at a molecular level to significantly reduce chromatic aberrations via its ability to refract blue light. Ordinarily, it's difficult to converge these shorter wavelengths to a single plane which subsequently results in longitudinal chromatic aberration (evidenced as colour fringing along high-contrast edges).

The BR Optics technology is incorporated into a compound element as part of new 35mm's 14-element optical construction which also includes two aspherical types to correct for distortion and one made from 'Super UD' (ultra-low dispersion) optical glass which also helps counter chromatic aberrations.

The Mark II version of Canon's popular 35mm f1.4 wide-angle features a weather-sealed barrel design and is claimed to be more durable than its predecessor. A fluorine coating is applied to the exposed front and rear lens surfaces to repel moisture and dust. The new lens also has Canon's proprietary 'Sub-Wavelength Structure Coating' (SWC) which is applied to the rear surface of the first and second aspherical lens elements to help reduce flare and ghosting. Other notable features include a nine-bladed diaphragm to create smooth out-of-focus effects and a minimum focusing distance of just 28 centimetres.

Autofocusing is via a rear-focus optical system using Canon's original ring-type USM ultrasonic focus drive. A full-time manual override is available. The new 35mm f1.4 accepts 72-millimetre diameter screw-thread filters. It weighs 760 grams and is 106 millimetres in length.

Local availability is from now. For more information visit www.canon.com.au





BEHIND EVERY POWERFUL IMAGE IS A POWERFUL STORY

The Canon Light Awards is a programme of challenges created and judged by photographers. Be inspired, challenge yourself, improve your skills and become better storytellers through photography. Winners receive feedback from our Masters, plus there are over \$150,000 in prizes to be won. See the latest brief and submit your entry at www.canon.com.au/lightawards

Photo: Stephen Dupont

Canon

no one sees it like you

SURECOLOR UPGRADES FOR EPSON'S LARGE FORMAT PRINTERS

FOLLOWING THE LAUNCH of its A3+ and A2+ format SureColor series photo printers, Epson has now introduced these upgrades to its large format rollpaper line-up, giving birth to four new P-Series models.

These all feature the new UltraChrome HD inkset which delivers an enhanced colour gamut and a higher D-Max for blacker blacks. They also have a faster 1000Base-T Ethernet interface and 1.0 GB of RAM. The SureColor P-Series also features upgraded versions of Epson's 'Precision Core' print heads with VSDT for improved print quality and durability, new accounting software for improved job costing, new Epson Print Layout software (which works as a plugin for Photoshop, Lightroom and Nikon ViewNX-i for simplified photo printing) and improved colour management.

The line-up starts with the SureColor SC-P6070 which is a 24-inch wide model and the SC-P8070 which is a 44-inch wide model, both with eight-colour printing (i.e. nine cartridges, including Matte Black and Photo Black). Epson says both these models are primarily aimed at photographers. The SureColor SC-P7070 and SC-P9070 are 24-inch and 44-inch models respectively with ten-colour printing (11 cartridges), designed for proofing and packaging applications, advertising agencies and creating fine-art photographic prints for exhibitions and galleries.

Epson says that its 11-ink models provide an "unparalleled" 99 percent coverage of the Pantone colour range. The SC-P7070 and SC-P9070 use an extended version of the UltraChrome HD inkset – called UltraChrome HDX. Both these printers can be configured with either Light Light Black which enables 98 percent Pantone coverage or a new Violet colour which increases the gamut to the 99 percent coverage.

Both the new UltraChrome HD and HDX inksets include a new Photo Black ink with a pigment density that's been increased by almost 1.5 times. Additionally, the formulation has been adjusted to give a "significantly higher" D-Max than those produced with the previous Stylus Pro range printers. The Matte Black also has an increased pigment density while the yellow has a claimed 30 percent increase in stability when exposed to UV radiation.

Pricing starts at \$5000, but if you want the full glory of 44-inches wide paper and ten-colour printing you'll need to spend nearly \$11,000. For more information about Epson's new large format photo printers visit www.epson.com.au



A firmware upgrade offers added video functionality to the Olympus OM-D E-M5 Mark II and E-M1.

EXTENDED VIDEO CAPABILITIES FOR THE TOP-END OM-D CAMERAS

IT'S NOT BEEN on the market all that long, but the OM-D E-M5 Mark II is the subject of a new firmware upgrade from Olympus which will further enhance its already pretty impressive video capabilities.

Firmware Version 2.0 for the E-M5 II introduces a new Flat 'Picture Mode' preset for use with video recording and which is designed to deliver an expanded dynamic range and allow for easier colour grading in post-production. It also provides linear PCM sound synchronisation with the Olympus LS-100 professional digital audio recorder. In-camera video sound recording quality has been improved via a new digital noise filter.

The flagship OM-D E-M1 also gets a firmware upgrade – called Version 4.0 – which, again, is primarily designed to give this

camera enhanced video recording capabilities. These include 24 and 25 fps recording speeds (with progressive scan) for Full HD recording, a revised image stabilisation algorithm to give improved stability when shooting handheld, new focus stacking and focus bracketing modes to improve the depth-of-field for close-up imaging, a silent electronic shutter mode, 4K time-lapse video recording and a simulated optical viewfinder mode (as per the E-M10 II) which gives an extended dynamic range to replicate the look of an optical finder.

In line with the firmware updates for both cameras, firmware for all Olympus M.Zuiko Digital PRO and Premium series lenses will be updated at the same time.

All will become available in November. For more information visit www.olympus.com.au

BRIEF EXPOSURES

Cosina – the current keeper of the Voigtlander marque – has announced it will cease production of the Bessa-Series Voigtlander 35mm film rangefinder cameras and a large number of L and VM mount lenses. This means the end of the road for the remaining R2M, R3M and R4M bodies (all the 'A' models ended last year) so if you want one of these hugely affordable modern M-mount classics, you'll need to act fast. Production of the SL and



SL II Series lenses for selected 35mm SLRs is also ending. Production of Micro Four Thirds mount lenses continues. Voigtlander products are distributed in Australia by Mainline Photographics, telephone (02) 9437 5800 or visit the website www.mainlinephoto.com.au

SIGMA

Wide, bright, brilliant.

Introducing SIGMA's brilliant new Art line 24 mm wide angle. F1.4 brightness for stunning images in low-light, nightscapes and cityscapes. Shallow depth-of-field helps create stunning portraits and the wide 24mm creates arresting landscapes. Breathtaking optical performance, outstanding image quality. Cleverly engineered, with 15 elements for images that are sharp, bright and full of life.

A Art 24mm F1.4 DG HSM

Suits popular DSLR cameras including Nikon & Canon.
And if you change your camera, you can keep your lenses thanks to the Sigma Mount Changing Service.

RRP \$999 .00



sigmaphoto.com.au



facebook.com/SigmaPhotoAustralia



twitter.com/SigmaAustralia



Hand Crafted
in Japan

Sigma Lenses are available from the following leading photographic retail stores.



WHAT'S NEW

The GX8's 'Live MOS' type sensor boasts the highest resolution yet seen in a Lumix G Series camera.



NEW LUMIX GX MODEL GETS 20 MP AND DUAL IS

PANASONIC CONTINUES TO demonstrate it's in tune with what photographers want in a mirrorless camera. Following the SLR-style Lumix G7 launched a couple of months ago comes the Lumix GX8, the company's latest rangefinder-style model.

The GX8 replaces the highly popular GX7 and retains that model's novel tilting viewfinder arrangement, but has an all-new sensor, the advanced '4K Photo' modes introduced with the G7, an adjustable-angle monitor screen, faster continuous shooting speeds and an upgraded autofocus system.

The EVF tilts through 90 degrees and employs an OLED-type panel with a resolution of 2.36 million dots. The magnification is increased to 0.77x (35mm format equivalent) and the scene coverage is 100 percent. A larger eyecup addresses the issue of 'light leakage' which was problematic on the GX7. The 7.62 cm monitor screen is also an OLED panel and adjustable for both tilt and swing, with a resolution of 1.037 million dots. It also provides touchscreen controls.

The GX8's 'Live MOS' type sensor boasts the highest resolution yet seen in a Lumix G Series camera with 21.77 million pixels (20.3 MP effective). The ISO range is equivalent to 200 to 25,600 with a one-stop 'pull' to ISO 100. The new sensor is matched with the same 'Venus Engine' processor as is used in the flagship GH4 giving a maximum continuous shooting speed of 8.0 fps with the AF/AE locked to the first frame, 6.0 fps with continuous AF/AE adjustment. As is becoming standard on Panasonic Lumix G Series cameras, the GX8 can record Ultra HD 4K video at 3840x2160 pixels and 25fps, giving a bit rate of 100 Mbps. It can also record Full HD video in either the MP4 or AVCHD formats. Other video features include the 'Cinelike' D and V profiles, a zebra pattern generator, focus-peaking display, stereo audio input and an uncompressed (8-bit, 4:2:2) video output at up to 4K from the HDMI terminal.

A first for the Lumix G range is sensor-based image stabilisation which can be combined with the optical correction provided

in the system's lenses. With both body-based and lens IS working together, Panasonic claims stabilisation is 3.5x more effective at wide-angle focal lengths and 1.5x at telephoto focal lengths. The body-based stabiliser provides correction over four axis and, particularly useful, is available when using non-stabilised 'legacy' lenses.

As on the G7, there's a choice of '4K Photo' which leverages the 8.3 MP resolution of a still frame extracted from 4K video footage. The '4K Pre-Burst' mode captures 60 images in two seconds (i.e. at 30 fps); 30 prior to shutter release and 30 after, the idea being that you'll never miss that 'decisive moment'.

In '4K Burst' mode, the camera shoots at 30 fps for as long as the shutter button is held down for up to 29 minutes and 59 seconds. The third option – called '4K Burst S/S' – does the same except that it works like a 'T' setting so one press of the shutter button starts the recording and a second press stops it (S/S is short for Start/Stop). These '4K Photo' modes can be used with any exposure control mode and, with the latter two, there's a choice of aspect

ratios, namely 4:3, 3:2, 16:9 and 1:1. Also inherited from the G7 is the 'DFD' (Depth From Defocus) contrast-detection autofocus system – which enables a response time of just 0.07 seconds – and employs a new control algorithm which uses the target's size and motion vector as well as its colour.

Also new is a 'Starlight AF' mode which employs much smaller measuring points – so it can work with pinpoints like stars – and increased low-light sensitivity down to -4.0 EV.

The provision of a sensor-based shutter allows for a top speed of 1/16,000 second (and continuous shooting at 10 fps) plus the GX8 has a built-in Wi-Fi module (with NFC connectivity), 22 'Creative Control' effects settings, an intervalometer for time-lapse photography, and a silent shooting mode.

The magnesium alloy bodysell is now fully sealed against the intrusion of dust or moisture, features an updated control layout which now includes a dial for setting exposure compensation (up to +/-5.0 EV), front and rear input wheels and eight programmable 'Fn' buttons (plus five accessed via the monitor screen).

Available in either black or silver, the Lumix GX8 is priced at for \$1399 for the camera body or \$1499 packaged with the G Vario 14-42mm f3.5-5.6 ASPH Mega OIS zoom. A second kit option provides the G X Vario 14-140mm f3.5-5.6 ASPH Power OIS superzoom (equivalent to 28-280mm) and is priced at \$1999. The third kit option has the G X Vario 12-35mm f2.8 ASPH Power OIS Pro zoom and is priced at \$2399.

For more information visit www.panasonic.com.au



PHOTOGRAPHY EXHIBITIONS & EVENTS

Current to 6 December: Exhibition. The Alchemists: Rediscovering Photography In The Age Of The JPEG.

Artists from Australia, Japan, Thailand and New Zealand explore the creative relationship between analogue and digital processes in photographic practice. At the Australian Centre for Photography (ACP), 257 Oxford Street, Paddington, NSW 2021. Gallery hours are 10.00am to 5.00pm Tuesday to Saturday, 12.00 noon to 5.00pm on Sunday. For more information telephone (02) 9332 0555 or visit www.acp.org.au

Current to 16 February 2016: Exhibition. The Enclave. An immersive, six-screen video art installation by Irish contemporary artist Richard Mosse filmed in the Democratic Republic of Congo using

16mm colour infrared movie film. At Level 3, the NGV International, 180 St Kilda Road, Melbourne, Victoria 3000. Gallery hours are 10.00am to 5.00pm daily. More information on telephone (03) 8620 2222 or www.ngv.vic.gov.au

20 November – 13 March 2016:

Exhibition. Bailey's Stardust. A retrospective exhibition of photographs from London's National Portrait Gallery covering the long career of legendary fashion photographer David Bailey. At the National Portrait Gallery (NPG), King Edward Terrace, Parkes, ACT 2600. Gallery hours are 10.00am to 5.00pm daily. For more information telephone (02) 6102 7000 or visit www.portrait.gov.au

20 – 25 September 2016: 2016 Photokina World Of Imaging.

The world's largest exhibition of new imaging products and processes. At the Köln Messe, Cologne, Germany.

ASTRON. THE WORLD'S FIRST GPS SOLAR WATCH.

In 2012 we made history with Astron, the world's first GPS solar watch.

Using just the power of light, Astron adjusts to every time zone on earth at the touch of a button.

In 2014 we took Astron even further, introducing a full-function GPS solar chronograph.

Now with dual time display, Astron is simply the world's finest GPS solar watch.



ASTRON



GPS
SOLAR

*If there are changes in the region / time zone, manual time zone selection may be required.

SEIKO

DEDICATED TO PERFECTION

seiko.com.au



YOUR NEXT
ADVENTURE
STARTS HERE...



...with the award winning
ultra light carbon fibre travel and
professional tripods by Sirui

MAINLINE
P H O T O G R A P H I C S

OUR FOCUS IS ON YOU

SHOWROOM ADDRESS
Unit 213, 68 Alexander Street,
Crows Nest, NSW 2065
02 9437 5800
sales@mainlinephoto.com.au

www.mainlinephoto.com.au

WHAT'S NEW

Tamron introduces its SP series full-35mm fast lenses featuring weather-proofed barrels and more.



PRIME TIME FROM TAMRON

FURTHER PROOF THAT prime lenses are once again in fashion is Tamron's introduction of two new SP Series models which, the company says, represent the "first wave" of releases in this sector.

Both new primes incorporate Tamron's 'Vibration Compensation' (VC) optical image stabilisation system and the 'Ultrasonic Silent Drive' (USD) ring-type autofocus motor. Both also feature a weatherproofed barrel construction and have a maximum aperture of f1.8. The choice of focal lengths is 35mm and 45mm and these lenses are designed for D-SLRs with full-35mm sensors. Available right now are the Canon and Nikon mount versions with those for Sony Alpha to follow.

The Tamron SP 35mm f1.8 Di VC USD has a ten-element optical construction which includes two glass-moulded aspherical types, one with

low dispersion characteristics and one XLD (extra low dispersion) type. These correct for distortion, spherical and comatic aberrations, and chromatic aberrations. The minimum focusing distance is 20 centimetres, giving a maximum magnification ratio of 1:2.5.

The SP 45mm f1.8 Di VC USD also has a ten-element optical construction which includes two glass-moulded aspherical types and one with low dispersion characteristics. Its minimum focusing distance is 29 centimetres, giving a maximum magnification ratio of 1:3.4. Both these lenses have Tamron's 'eBand Coating' to suppress both ghosting and flare, and a fluorine coating is applied to the front element to repel moisture and grease.

Both the 35mm f1.8 and 45mm f1.8 primes are priced at \$1099 and for more information visit www.tamron.com.au

SONY CONTINUES A7 SERIES UPDATE

THE LAST OF the original trio of Sony A7 full-35mm mirrorless cameras has been given the 'Mark II' treatment. Still without any rivals nearly two years after being launched – although that may be about to change – the A7 models continue to gain in popularity with both enthusiasts and pro-level users.

The new A7S II maintains ultra-high sensitivity as one of its key selling points, derived from its 12.2 megapixels (effective) full-35mm 'Exmor' CMOS sensor. The maximum ISO setting is 409,600 and Sony claims the camera delivers low noise characteristics across its entire sensitivity range which starts at ISO 50. As before, the A7S

II records 4K video – in the XAVC S format – with a full pixel read-out (i.e. using the full sensor area without pixel 'binning'), but also Full HD at 120 fps with a bit rate of 100 Mbps (to give 4x/5x slow motion footage). There's a number of additional features to appeal to the experienced video-maker, including new profiles (S-Gamut3.Cine/S-Log3 and S-Gamut3/S-Log3) to give a wider dynamic range (up to 14 stops) and easier colour correction, a Gamma Display Assist function for more accurate monitoring, and an enhanced zebra pattern generator. A 'clean' HDMI output is available (4:2:2 colour, 8-bit) with internal recording to SD format or Memory Stick PRO memory cards. Built-in stereo microphones are supplemented by a 3.5 mm stereo audio input and the Sony has a 3.5 mm stereo audio output for connecting headphones.

The A7S II now features five-axis in-camera image stabilisation (giving up to 4.5 stops of correction for camera shake), a 169-points AF system with a minimum sensitivity of -4.0 EV (at ISO 100), an XGA OLED-type electronic viewfinder, tilt-adjustable monitor screen and built-in Wi-Fi with NFC connectivity. The maximum continuous shooting speed is 5.0 fps (with the option of silent operation) for a burst of 64 JPEGs (large/extra fine) or 31 RAW frames.

For more information visit www.sony.com.au



Panasonic

NO TRIPOD, NO WORRIES

CHANGING PHOTOGRAPHY



THE NEW LEADER IN STABILITY

The LUMIX GX8 – introducing Dual I.S. technology, combining lens and body image stabilisation for ultimate stability in handheld photography. With a next generation 20MP Live MOS sensor, unique 4K technology, 2.36 million dot OLED tilting viewfinder, all in a weatherproof magnesium alloy body with stylish vintage undertones, the LUMIX GX8 is the ideal companion to unleash your creative passion.

Now that's changing photography.



LUMIX G

www.panasonic.com.au

PALMUMXGX8CAMERA

WHAT'S NEW



CELEBRATE INTERNATIONAL FOOD PHOTOGRAPHY AND FILM DAY 2015

INTERNATIONAL FOOD Photography And Film Day takes place on Thursday 12 November 2015 and it's a day to celebrate food photography and film in a caring sharing way. Why not put together a smorgasbord of food and celebrate your favourite food cultures with family and friends?

The 'Food For Sharing' theme for 2015 is designed to inspire you to take a winning shot or video of your favourite feast. Wherever you are on Thursday 12 November, you can create your own food masterpiece. If you're looking for inspiration, visit the Food For The Family and Food For Celebration Finalists' gallery at <https://www.pinkladyfoodphotographeroftheyear.com/finalists-gallery>

Everyone who takes part on Facebook, Twitter and Instagram on Thursday 12 November 2015 using the hashtag #FeastSocial will automatically be entered into a draw to win an amazing five credits to enter Pink Lady Food Photographer Of The Year 2016 and a Partridges Festive Delights Hamper (valued at £95, or approximately A\$210). The hamper is bursting with delicious goodies, including biscuits, chocolates, preserves and even a Christmas pudding and mince pies, just in time for yuletide festivities. (Note these contents may vary subject to customs requirements dependent upon the country of residence of the winner.)

Photographs and videos on smartphones or cameras can make this a day to remember.

Visit www.internationalfoodphotographyday.com and look out for all the details about how to enter the Pink Lady Food Photographer Of The Year 2016 in the January/February 2016 issue of *Camera* or on our Website at www.avhub.com.au (click through to Camera magazine).

CANON SETS ITS SIGHTS ON (LOTS) MORE PIXELS

IF YOU'RE STILL getting your head around Canon's 50 megapixels D-SLRs, the message from the company is that you ain't seen nothin' yet.

Canon had released details of various development projects which will see it move the Cinema EOS system up to 8K video and its EOS D-SLR system up to 120 megapixels. What's more, also in the pipeline is an 'APS-H' format sensor (which is slightly larger than 'APS-C', giving a focal length magnification factor of 1.3x) with a staggering resolution of 250 megapixels. This CMOS-type sensor has an imaging area of 29.2x20.2 millimetres and delivers an output of 19,580x12,600 pixels.

Canon also claims an ultra-high signal readout speed of 1.25 billion pixels per second which has been made possible through circuit miniaturisation and enhanced signal-processing technology. As a result, the 250 MP sensor will be able to capture full-resolution images at a speed of 5.0 fps. Additionally, despite the colossal pixel count, Canon says it will also deliver excellent high sensitivity performance.

There's no indication of when a product using this sensor will go into production (it appears more likely to be used in industrial and scientific applications), but the wording of the press release regarding the 8K video camera and the 120 MP D-SLR seems to imply that neither of these products are very far away.

The 8K Cinema EOS System camera will be equipped with a Canon Super 35 mm-equivalent CMOS sensor that delivers a resolution of

Canon's proposed 8K Cinema EOS video camera will deliver a resolution of 8192x4320 pixels at 60 fps.



8192x4320 pixels (i.e. approximately 35.39 million pixels effective) at 60 fps. It will have the EF mount and will be compatible with 78 of Canon's existing models (60 EOS lenses and 18 EF Cinema lenses). Canon is claiming 13 stops of dynamic range. An 8K reference display – with a pixel density exceeding 300 per inch – is also planned.

Details of the 120 MP D-SLR are sketchy; even sensor size – we're assuming it's full-35mm because it looks very much like one in the supplied image – but it will be a CMOS device. To quote from the press release; "The high-resolution images that the camera will be capable of producing will recreate the three-dimensional texture, feel and presence of subjects, making them appear as if they are really before one's eyes." The 120 MP camera will be compatible with 60 of Canon's existing 96 EF system lenses.

For more information about Canon's current EOS D-SLRs and Cinema EOS video camcorders visit www.canon.com.au

OUR STORES

NSW

Albury | Broadway
Brookvale | Campbelltown
Castle Hill | Coffs Harbour
Erina | Griffith
Hornsby | Katoomba
Lismore | Newcastle
Orange | Parramatta
Penrith | Ryde
Sydney | Taree

NT

Alice Springs | Darwin
Palmerston

QLD

Broadbeach | Bundaberg
Cairns | Carindale
Chermside | Dalby
Garbutt | Helensvale
Indooroopilly | Loganholme
Mackay | Noosaville
North Lakes | Robina
Rockhampton | Toowoomba
Townsville

SA

Adelaide - Central Market
Adelaide - City Cross
Adelaide - Twin City
Mount Gambier

TAS

Devonport | Hobart
Launceston

VIC

Ballarat | Bendigo
Croydon | Echuca
Geelong | Horsham
Sale | Shepparton
Swan Hill

WA

Albany | Bunbury
Cannington | Esperance
Fremantle | Geraldton
Leederville | Mandurah
Midland | Morley
Perth

camerahouse

FIND ALL OF THE —WINNERS—

IN-STORE & ONLINE



☎ 13 FOTO (133 686)



www.camerahouse.com.au



LEICA Q

A pioneer by tradition.

We have been redefining tradition for more than a century with innovative cameras that concentrate on the essence of photography – the image. Our newest member, the Leica Q is no different. It is the perfect instrument to realise your photographic ambitions and capture the decisive moments in your life. Fast, intuitive and Made in Germany. Find out more about the new Leica Q at q.leica-camera.com

LEICA. DAS WESENTLICHE.



Experience the Leica Q for yourself in Leica Boutiques and at selected authorised Leica dealers.



CAMERA
MAGAZINE AUSTRALIA

IMAGING
AWARDS 2016

SPONSORED BY **camerahouse**

2016 CAMERA MAGAZINE IMAGING AWARDS

Our annual design awards for imaging products – which have run, incidentally, continuously since 1981 – always provide a good time to take

the pulse of the camera industry. Twenty-five perhaps wasn't quite as dramatic as last year in terms of the variety and range of new products which arrived on the market, but it was no less interesting. It was more a year of consolidating trends of which the rise and rise of the mirrorless camera continues to reshape the interchangeable lens category.

Reports of the D-SLR's death remain premature, but there's no question that mirrorless cameras are becoming more and more of an attractive proposition and even D-SLR diehards are switching. All the major players in mirrorless cameras – Fujifilm, Olympus, Panasonic, Samsung and Sony – did their bit for the sector this year, ably supported by the independent lens makers. The key technological advances – most notably in electronic viewfinders, various developments in contrast-detection or hybrid autofocus and more effective body-based image stabilisation systems – all nibbled away at the D-SLR's defences. Despite commendable attempts to counter with more compact designs, it's very likely the D-SLR will retreat to the higher ground of full-35mm models with ultra-high resolutions (cue the Canon EOS 5Ds) and leave the entry-level – and probably even the lower end of the enthusiast-level category – to the growing legion of more compact but hugely capable mirrorless models. Canon, in particular, hasn't even scratched the surface in mirrorless cameras, but expect that to change in the near future and there's little doubt Nikon is just biding its time in terms of an F-mount mirrorless camera with a full-35mm size sensor.

That said, both these brands along with Pentax are doing an admirable job of keeping the D-SLR in the race and this year was not only notable for the 50 MP

Canons, but a lot of activity in D-SLRs lenses (especially from Nikon) and Ricoh's confirmation that there will be a full-35mm format Pentax D-SLR in the very near future. Pentax too, continues to pack its entry-level and enthusiast-level D-SLRs with so many features that they just can't be ignored.

We've now mentioned lenses a couple of times already and that's because, if anything, 2015 was the year of the interchangeable lens. They're now arriving thick and fast for the major mirrorless mounts (i.e. MFT, Sony FE and Fujifilm X) with so much choice from both the camera makers themselves and the independents that this is now simply no longer an issue. More generally, fast primes are in, but so is manual focusing and even retro-look styling. Of course, this is partially being driven by the demands of videographers, and the continued convergence of stills and video is another ongoing trend perhaps best exemplified by Panasonic's latest development of its '4K Photo' functions. These further leverage the 8.3 megapixels still frames that can be extracted from 4K resolution video, essentially delivering continuous shooting at 30 fps with a variety of processing options to deliver the optimum result both technically and creatively. Combining this with bracketing for just about everything is just a small step away. As video steps up to 6K resolution and, inevitably, 8K (Canon has already shown a prototype camcorder), the available still frames will top 20 MP and hybrid cameras will challenge both D-SLRs and CSCs.

However, that's in the future and right now camera buyers are being treated to a growing selection of ever more innovative mirrorless designs which, in many cases, also trade heavily on the benefits of their compactness and, perhaps more importantly, the reductions in weight of even a full system. In the opposite corner, the D-SLR has reputation, the optical viewfinder (there are still one or two benefits) and the extensiveness of the various lens systems on its side. But the real beauty of all this is that you

still have a choice... and will have for the foreseeable future.

So now to some house-keeping. The period of eligibility for the Camera Magazine Imaging Awards runs from 1 October to 30 September; these dates primarily selected to prevent things being skewed in a Photokina year by the rush of new arrivals at the world's biggest photo show. In reality, Photokina is no longer the new product showcase it once was – few camera makers are now prepared to delay the launch of an important new product – but we've stuck with this period of eligibility because it also works in terms of avoiding any pre-Christmas rush.

It's also a key requirement for eligibility that a product must be on sale – and this means being physically available at a substantial number of retail outlets in the country's major metropolitan centres – by 30 September. Being available for pre-ordering doesn't count and any online seller has to be able to guarantee a delivery by 30 September too.

As always, all the eligible products in each category are judged on a wide variety of design, operational and performance criteria along with a consideration of just how effectively the design brief has been met. Price is also taken into account, but it isn't necessarily a deciding factor because some products would still win even if they were twice or three times more expensive – because they're just so good – and some represent such exceptional value-for-money that they can't be beaten. Each of these criteria carries a points score.

After we've compiled a shortlist of the top-scoring products in each category, we then look beyond the purely objective – such as the features and specs – to subjective elements such as the styling, the user experience and maybe even more intangible aspects that might contribute to a 'feel good' factor. Reputations don't really count for much here – it's the individual products that matter most – but this is where they can be made which is why we pride ourselves on a judging process that occasionally throws up surprises, but always delivers worthy winners.

AWARDS

CONSUMER DIGITAL SLR – THE FINALISTS

Canon EOS 750D · Nikon D5500 · Pentax K-S2

CONSUMER DIGITAL SLR OF THE YEAR

PENTAX K-S2

There's little doubt that things are slowing down at this end of the D-SLR market and any real innovation is now a rarity. With all due respect to Canon and Nikon, both are essentially recycling the same design elements with a few tweaks made here or there to create interesting, but not hugely significant, points of difference. Ricoh, to its credit, certainly tried something very different with last year's winner of this category – the Pentax K-S1 – and while the K-S2 is less adventurous in comparison, it still represents a more creative attempt to counter the mirrorless insurgence.

Mind you, it's always been the Pentax way to offer better value for money in SLRs – starting way back with the Spotmatics – so the K-S2 sticks with tradition in this regard and offers, for example, a fully weatherised bodyshell, a proper pentaprism viewfinder (rather than the penta-mirror shortcut), interchangeable focusing screens, and a fully-adjustable LCD monitor screen with a scratch-

resistant faceplate. All these are features more normally associated with higher-end enthusiast-level models. The K-S2's 20 MP sensor goes without an optical low-pass filter to optimise its resolution, but this camera still gets the sophisticated 'Anti-Aliasing Filter Simulator' system which is designed to provide varying levels of correction for moiré patterns, depending on the subject matter. In just about every other area, the Pentax has extended capabilities – including advanced features such as multi-shot HDR, an intervalometer and a multiple exposure facility – complemented by a true twin input wheel operation and supported by excellent imaging performance across its sensitivity range.

Affordability pushes the K-S2 further towards irresistibility and while it's truly symbolic of why Pentax D-SLRs deserve careful consideration over the models from either Canon or Nikon, it's also a compelling reason for choosing a D-SLR full stop.



ENTHUSIAST DIGITAL SLR – THE FINALISTS

Canon EOS 7D II · Nikon D7200 · Pentax K-3



ENTHUSIAST DIGITAL SLR OF THE YEAR

NIKON D750

Launched almost immediately after this year's period of eligibility opened, the D750 has held its own for the entire time, unchallenged in its combination of body size and sensor size, not to mention performance and pricing. If full-35mm sensors eventually end up being the refuge for D-SLRs, this is how an enthusiast-level model should look.

The compact bodysell features a novel monocoque design so the covers and chassis are integrated into the one component. This benefits the overall strength, but eliminating separate covers also has benefits in terms of its weatherproofing as there are fewer joins and junctions. Twelve months on, the D750 is still the smallest D-SLR on the market with a full-35mm sensor. It has a tilt-adjustable LCD monitor screen, a full glass pentaprism viewfinder and dual memory card slots. On the inside is just under 25 MP of resolution with Nikon's current-generation 'Expeed 4' processor, giving 6.5 fps continuous shooting and 1080/50p video recording.

The 51-point autofocus has extended low light sensitivity down to EV -3.0 (at ISO 100) and the metering system – shared with the D810 – is based on a 91,000 pixels RGB-sensitive sensor. Beyond the 'basics', the D750 is packed with high-end features so it's a hugely capable machine in its own right, but more than capable of deputising for a D810 as a back-up body. The video capabilities are right up there too, including also recording at 25 and 24 fps, the provision of both a stereo audio input and output, zebra pattern generator and uncompressed 8-bit RAW data output via HDMI connection (with simultaneous recording to a memory card). And the D750 also has size on its side when it comes to competing with the mirrorless cameras that are proving popular with video-makers.

In our review of the D750, we concluded, "As a complete package – with relative affordability also thrown into the mix – it's arguably the best combination of everything you can have in a full-35mm D-SLR right now". It's still the case now.

PROFESSIONAL DIGITAL SLR – THE FINALISTS

Canon EOS 5Ds/DsR · Leica S Typ 007 · Phase One XF

PROFESSIONAL DIGITAL SLR OF THE YEAR

CANON EOS 5Ds/DsR

Canon has been at the forefront of all the major developments in D-SLRs so we shouldn't be surprised that it has taken up the challenge – and it is a challenge on a number of levels – of venturing into the rarefied atmosphere of ultra-high resolutions. If the lower end of the D-SLR market is under threat from the mirrorless invasion, it makes quite a lot of sense to go even further upmarket and attract new buyers who might otherwise have only found what they needed in a digital medium format system. In reality it's actually not quite as straightforward as that, but the EOS 5Ds duo certainly provides a unique combination of 50 MP resolution with 'small camera' ergonomics and handling... plus a much more extensive choice of lenses.

The larger sensors in the 50 MP digital medium format cameras offer other benefits, but Canon has worked hard to exploit the huge performance potential of its full-35mm size imagers, both via their architecture (new gapless microlens arrays for example) and the various measures taken to counter vibration, both internally and externally.

It's a real issue with this high a resolution on a sensor of this size, necessitating that Canon redesign

the reflex mirror assembly, adopt new body materials, reinforce the tripod mount and introduce a time-delayed shutter release following mirror lock-up. In practice then, the EOS 5Ds/DsR need to be used a lot like a digital medium format camera – including adopting a heavier-duty tripod than you might ordinarily think is warranted – but they're easily more manoeuvrable overall, more capable, better featured, more versatile (partially thanks to the huge choice of lenses)... and have we mentioned the price difference? Here especially, the appeal of the Canon D-SLRs comes into... ahem... particularly sharp focus. At best, the 5Ds is half the price of the Pentax 645Z, but beyond this, the other 50 MP DMF systems are in the magnitude of three, four or even five times more expensive. Get everything right with the set-up, and the differences in image quality don't reflect this... the results are simply stunning.

When having 50 MP of resolution cost more than a well-equipped hatchback it was easy to convince yourself that you really didn't need it. Now that Canon has put it within much easier reach, the EOS 5Ds will convince you that you really can't do without it.



CONSUMER COMPACT SYSTEM CAMERA – THE FINALISTS

Panasonic Lumix GM5 · Fujifilm X-T10 Olympus OM-D E-M10 Mark II

CONSUMER COMPACT SYSTEM CAMERA OF THE YEAR

OLYMPUS OM-D E-M10 MARK II

The year 2015 could be summed up as 'more of the same, but better'. Nowhere is this better exemplified than in this category which was won last year by the original Olympus E-M10. It romped home because, despite being the entry-level OM-D model, it was still exceptionally well featured and, in our opinion at least, encapsulated the spirit of the legendary OM 35mm cameras more convincingly than any of its siblings. The Mark II version does it even better.

It's been restyled to look even more like an OM System SLR, but the revised control layout also brings practical benefits in terms of improved ergonomics which deliver enhanced operational efficiency. Then, while the price stays exactly the same as before, the new camera gets essentially the same OLED-based EVF as the E-M5 Mark II and a version of that model's hugely effective five-axis image stabilisation system. Adding a sensor-based shutter option bumps up the top speed to 1/16,000 second and allows for super-quiet shooting (as any mechanical noise is eliminated).

The video capabilities are upgraded to pretty well the E-M5 II's spec too, so in terms of value for money in the mirrorless market, the E-M10 II is simply unbeatable.

It's also the prettiest looking mirrorless camera on the market by far. But there are also lots of nice little touches which show that Olympus is not just thinking about features and performance, but also the whole experience of using this camera which is simply hugely pleasurable.

For example, the EVF has a 'Simulated Optical Viewfinder' (S-OVF) which extends the dynamic range to replicate the look of an optical finder. It also switches off the preview functions so you can go back to working the camera traditionally.

While the E-M10 Mark II is actually very much a product of the 21st century – with contemporary conveniences such as touchscreen controls – it also pays homage to its great heritage and, better still, seamlessly integrates all these elements into one highly cohesive and capable package.



AWARDS

ENTHUSIAST COMPACT SYSTEM CAMERA – THE FINALISTS

Panasonic Lumix G7 · Panasonic Lumix GX8
Samsung NX5000 · Olympus OM-D E-M5 Mark II.

ENTHUSIAST COMPACT SYSTEM CAMERA OF THE YEAR

PANASONIC LUMIX G7

Right from the outset Panasonic has shown it was tuned into the photographer's wavelength and has continued to demonstrate that it listens to user feedback and then acts decisively. We all thought the original Lumix G1 was pretty good, but every subsequent model has introduced new features and refinements – derived from a combination of design team insights and consumer inputs – that have bettered the breed.

Now here we are at the G7 which, interestingly, is the most retro-looking camera in the series, but under the skin is the most progressive with features such as 4K video recording, a clever new way of autofocus and an ever-growing list of image processing functions. The restyle includes the adoption of front and rear input wheels – no doubt requested by numerous users of the previous models – which greatly enhances operational efficiency, but Panasonic continues to refine the touchscreen operability so the G7 has the best of

both worlds. It's the most affordable camera on the market to offer 4K video, but more interesting are the new '4K Photo' modes which use the higher video resolution and 30 fps recording speed to deliver some surprisingly handy capabilities for action photography. Likewise, the 'Depth From Defocus' (DFD) autofocus which overcomes the usual deficiencies of contrast-detection measurement to deliver speed and reliability comparable to D-SLR phase-detection systems... without going to the expense of a hybrid sensor.

The G7's 'smarts' – as well as the rest of its key capabilities and performance – are derived from Panasonic's expertise in processing image data and we'll see more of it in the future, especially in terms of further utilising high-speed capture to obtain the perfect frame. In the meantime, the attractions for both photographers and video-makers are many, not the least being its affordability. We really have never had it so good.



DIGITAL FIXED LENS CAMERA – THE FINALISTS

Canon PowerShot G3X · Leica Q
Panasonic Lumix LX100 · Fujifilm X100T.



DIGITAL FIXED LENS CAMERA OF THE YEAR

LEICA Q

With the lower end of the digital compact camera market now a mere shadow of its former self, for the manufacturers that remain in this category the emphasis has shifted to higher end models or the so-called 'superzoom' designs. Consequently, we've decided to rename this award, specifying the fixed lens aspect in particular which is a rather more relevant descriptor than the word "compact". This is particularly true of the Leica Q which can hardly be considered to be a small camera, but it actually makes great use of the benefits of the fixed lens design.

While Leica's heritage is in interchangeable lens camera systems, the Q makes so much sense on so many levels that you wonder whether a 35mm film version – a few decades ago – might not have been good idea too. The Q's recipe is a tasty one, starting with the fact that this is a true 'Made In Germany' Leica – assembled at the company's new factory in Wetzlar – using an all-metal body, similar in styling to an M, combined with a full-35mm sensor and a matched

Summilux 28mm f1.7 ASPH lens. Also in the mix is an LCOS-type EVF (the initials stand for Liquid Crystal On Silicon) with a resolution of 3.68 million dots and it's simply brilliant. Digital crops for the equivalent of the 35mm and 50mm focal lengths are available and, because the sensor has an effective pixel count of 24.2 million, they're actually useable.

Despite its classic looks, the Q boasts, among other things, touchscreen controls, Full HD video recording and built-in Wi-Fi. Yet this is still a camera that's distilled down to the most essential elements which makes it an absolute joy to use, enhanced by the usual Leica pleasures of a hewn-from-the-solid build quality and a precision feel to every mechanical operation. Perhaps those earliest 35mm Leicas engendered the same compulsion in photographers to simply get out and take pictures, but this characteristic is what clearly separates the Q from the rest of the field... you just want to pick it up and start shooting and then you don't want to put it down.

DIGITAL VIDEO CAMERA – THE FINALISTS

Black Magic Micro · Panasonic Lumix DMC-LX100 · Zoom Q8

DIGITAL VIDEO CAMERA OF THE YEAR

ZOOM Q8

With video becoming

such an integral part of visual communications, we'll probably have to revise this category in the future as, right now, it encompasses dedicated camcorders, the action cams and both the D-SLRs and CSCs which offer superior video recording capabilities. That's a broad field of products so we're not really comparing apples with apples. Nevertheless, some products still manage to stand out by virtue of doing things a bit differently to the rest of the pack... which is very much the case with the Zoom Q8.

Video action cams are now very big business indeed, but most follow the same basic formula established by GoPro around a decade ago and even look pretty much the same. The one area where most are largely deficient is the quality of their audio recording which suffers from all the same problems of any camera with tiny, built-in microphones. If you're at all serious about your video productions, you're going

to have to record the sound separately which, depending on the situation, maybe equally problematic. With its background in digital audio recording, Zoom first tackled this issue with its Q4 action cam which was fitted with a pair of X/Y *unidirectional* stereo microphones located on a fold-out module. With the Q8 it's taken this concept a step further by making the microphones interchangeable, utilising the system introduced with its top-of-the-line H6 audio recorder. This means you can fit a mic capsule (there are five options) to specifically suit the type of subject or situation, plus the Q8 has two XLR/TRS inputs with phantom power, enabling the recording of four-track audio. On the video side, it offers a 3M HD recording mode at 2034x1296 pixels and 30 fps, representing a bit rate of 24 Mbps. It has a fold-out, colour LCD monitor with touch controls, an f2.0 wide-angle (160 degrees) prime lens and records to standard SD memory cards (including XC types). Consequently, the Q8 is an exceptionally versatile device for any application that involves recording music, voices or sound effects, but works just as effectively as a 'standard' action cam. It's a great example of thinking outside the square – and surprisingly affordable too – which puts the Q8 in a league of its own... among any category of video camera.



DIGITAL PHOTO PRINTER – THE FINALISTS

Canon Pixma PRO-10S · Canon Pixma PRO-100S
Epson SureColor SC-P600

DIGITAL PHOTO PRINTER OF THE YEAR

EPSON SURECOLOR SC-P600

As we noted in last year's awards, the days of big leaps in inkjet printing technologies appear to be over so now it's mostly a case of small steps which tweak performance in one area or another, or improvements to the operability. Consequently, it's been quite a few years since we've seen an all-new photo printer series and even Epson's freshly-minted SureColor line-up – which starts with the A3+ format SC-P600 – still uses a lot of the previous Stylus Pro platform. That said, the improvements are many and varied, adding up to some significant benefits and ensuring the P600 very neatly fits into this year's theme of 'More of the same, but better'.

The betterments start with the styling – not surprisingly, this is a much more contemporary looking machine – and extend to the operation which is now performed via a handy tilt-adjustable touch screen LCD panel. Wireless connectivity to various devices is, of course, a current essential and Epson pretty well covers all the bases here, including Apple Airprint and Google Cloud Print.

The new nine-colour UltraChrome HD pigment inkset delivers a better D-Max and incorporates new colourants with new resin encapsulation. As a result, according to our highly-experienced printer tester Trevorn Dawes, "...the print quality with pigments reaches to a new peak".

Importantly, the SC-P600 has the capacity to serve the needs of a wide range of enthusiast-level users from those who only print occasionally – but demand high performance when they do – to those who regularly output anything from fine-art B&W work to panoramas made on rollpaper.

Much can be actually left to the printer to sort out – which it does competently – or you can delve into your own set-ups to achieve a specific outcome.

Greater efficiencies all round sum up the key benefits of SureColor over Stylus Pro, but it's the incremental improvements to print quality that are really worth the investment... well, just think about how much the performance of digital cameras has advanced in the same period.

AWARDS

DIGITAL LENS – THE FINALISTS

Canon EF11-24mm f4.0L USM
Olympus M.Zuiko Digital ED 7-14mm f2.8 PRO
AF-S Nikkor 24-70mm f2.8 E VR
Sigma 24mm f1.4 DG HSM Art
Zeiss Loxia Series

DIGITAL LENS OF THE YEAR

SIGMA 24mm f1.4 DG HSM ART

It's a sign of the times that this was the most hotly-contested category in this year's awards. Some very fine lenses didn't even make it onto the shortlist of finalists while those that did are quite exceptional in terms of design or performance... or both.

Any line-up which includes Zeiss lenses is an illustrious one which makes Sigma's achievements with its bespoke Art Series range even more commendable. These lenses are designed and built with optimum quality and performance as the primary objectives yet somehow Sigma manages to factor in a degree of affordability without any compromises. Make no mistake, the Art primes are a match for anything from the prestigious German marques in terms of both their optical performance and the mechanical fit and finish. The 24mm f1.4 joins the 35mm and 50mm primes in the winner's circle and – along with the 24-35mm f2.0 zoom – Sigma has collected just about every major product design

award there is. While largely traditional in its concept and design, the 24mm does employ a number of contemporary technologies including a composite material called 'Thermally Stable Composite' (TSC) which is designed to maintain fine tolerances through a greater range of operating temperatures. Yes, we're talking that much attention to detail.

The optical construction includes three elements made from Sigma's "'F" Low Dispersion' glass which has been formulated to give a refractive index and dispersion characteristics similar to those of fluorite-type elements.

All this comes together in a glorious image quality which was particularly evident when we tested the Sigma 24mm on Canon's 50 MP EOS 5Ds and it came through with flying colours.

Even Canon is selective about which of its own lenses it recommends for use on its ultra-high resolution D-SLRs so Sigma can take a big bow here.

INNOVATIVE IMAGING PRODUCT – THE FINALISTS

Profoto B2 TTL · Panasonic Lumix C1 · UniqBall Tripod Head



INNOVATIVE IMAGING PRODUCT OF THE YEAR

PROFOTO B2 TTL

It's telling that approaching two years since Profoto introduced its wireless TTL control system, none of its rivals have come up with a competitive product. That's because it's not easy to do, but Profoto has since followed the monobloc-style B1 with an even more flexible and versatile system based on the concept of a compact power pack that can be fitted with two flash heads.

Like the B1, the B2 is essentially a studio flash system designed primarily to be used out of the studio – Profoto actually describes it as an "Off-Camera Flash System" – so you get more flash power than any on-camera flash (up to 250 joules in this instance), but with the convenience and exposure reliability of wireless TTL control. The B2 flash heads are compact enough to be

mounted on-camera via a bracket with the power pack carried on a shoulder strap. The power output can be wound down all the way to just one joule – great for fill-in applications – and in the B2's 'Freeze' mode, the flash duration is just 1/15,000 second and the recycling is rapid enough to allow continuous shooting at up to 20 fps. High Speed Sync (HSS) enables you to shoot with flash at shutter speeds of up to 1/8000 second.

The B2 heads incorporate LED modelling lamps and the battery pack simply and easily clips to the base of the system's power unit.

Additionally, Profoto has devised a whole new system of 'OCF' accessories so you can have all the creativity of studio flash on location... anywhere. So B2 is, quite simply, a flash of brilliance.



Discover a deeper black

EPSON
EXCEED YOUR VISION



THE NEW EPSON SURECOLOR SC-P600 A3+

Unprecedented black density: Epson UltraChrome HD Ink delivers the best ever Dmax for outstanding black & white and colour images

iFi Direct and Epson Connect: Easy to connect wirelessly and via the cloud

High speed: Produce an A3+ print in only 153 seconds

Large colour 2.7 inch touch screen: Easy to set up and manage

Greater productivity with high-capacity cartridges: Nine 25.9 ml ink cartridges with Auto-switching Photo and Matte Black Ink

Professional control: Advanced Black-and-White Mode for professional level neutral or toned black & white prints

Multimedia support: Front-in, front-out path for fine art media and roll support for panoramic prints

EPSON ULTRACHROME
HD INK

WiFi
CERTIFIED



Learn more, visit www.epson.com.au



SOUNDS AND VISIONS

Guy Sebastian

Enjoying a stellar career in music and television, singer Guy Sebastian applies both technical exploration and emotional responses to his photography.

INTERVIEW BY PAUL BURROWS

P

PROVING THAT WINNING THE first *Australian Idol* competition back in 2003 was no flash in the pan, singer Guy Sebastian has gone on to build an international career and is now a talent show judge himself, working on several seasons of *The X Factor*. So far, Guy has released eight albums, all of which have reached the top ten of the charts, two of them reaching number one. A recent highlight was represented by Australia in the 2015 Eurovision Song Contest – the first time Australia has been allowed to actually compete – and finishing a creditable fifth.

Not surprisingly then, Guy is a very busy man indeed, but we managed to catch up at his inner city recording studio in Sydney. As he turns the key to unlock the door, he admits he hasn't been inside the studio for a very long time, such have been the demands of his performing schedule and TV commitments. He also does a lot of charity work and, along with his wife Jules, runs his own charitable foundation called The Sebastian Foundation (visit thesebastianfoundation.org) which was established in 2013 primarily to assist families and community groups around Australia.

He may now be an instantly-recognisable celebrity, but away from the TV screen, Guy Sebastian is relaxed, approachable, immensely cheerful and, it has to be said, extremely likeable. He's also passionately articulate about the various loves in his life, and photography is high on this list.

Despite the many demands on his time, Guy is an enthusiastic photographer. When we met he'd just spent a fortnight on the road in Europe, shooting mainly landscapes – describing it as a “creative outlet”

“I've always been a huge lover of scenery and landscapes – even away from photography I've always been an outdoors person. I love a serene environment and I draw a lot of parallels with photography – what I see through my eyes – and music. Music is a medium, the same way vision is. There are audible ways of being moved... you might hear something that triggers a memory... and then there are landscapes that can do the same thing. You can be in a tumultuous place in your life and, suddenly, what you see can bring you peace.

“So I started wanting to capture these scenes in some way and that's where the journey of trying to capture them well – and trying to understand photography – began. I'm a reasonably technical person – I trained as a recording engineer and I still do a lot of music production work myself – so I really wanted to explore this aspect of photography to see how I could do things better.”

Guy recalls it was on a performing tour of Australia – a challenging 53 dates over three months – that he got really serious about his landscape photography... it's amazing he had any energy left for anything, but he says he was both amazed and motivated by the variety of scenery he was encountering during his journeys around the country. He even travelled separately from his band so he could stop whenever he saw something he wanted to shoot, and he's remained committed to developing his photographic knowledge and skills – as well as putting aside precious time to take pictures – ever since.

“I had my own bus on that tour and I'd stop randomly to shoot whatever I thought was interesting. My wife and family were very patient because we ending up stopping quite a lot.

“To be honest, at the time I never really thought it would amount to much... beyond just taking pictures for myself and my own pleasure. But then the general manager of my foundation had the idea for me to start using my photography to help raise funds... so we had an exhibition and auctioned some one-off prints and we raised a load of money for various charities. And that's great, because I've been able to use something that I really enjoy doing to help other people.”

Changing Fashions

“At the time I was creating multiple exposures and messing around with HDR shots – because that's what I was really into then – and I figured out very quickly that photography is trend-based, just like audio is. I've got pieces of audio equipment which I bought because they were fashionable and you just had to have them... but then, suddenly, that effect or that sound would be totally out of fashion. It's the same with photography.”

Guy observes – with some insight – that the parallels between photography and music are quite numerous, particularly in the modern era of digital reproduction which has changed both practices quite substantially.

Both, subsequently, are highly technical endeavours, but at the heart of both is emotion... and it's all too easy for the former to get in the way of the latter. As in a photograph, Guy notes, a song can end being overworked – too much technology used mainly for its own sake rather than providing any additional understanding of the subject matter. Sometimes a simple melody line or lyric is stronger – particularly in emotional terms – than any amount of post-production wizardry.

“Sometimes with songs I've gone back and back and back and back so much – because I can be so critical – that you lose the magic

of just making a moment. A song is a moment in someone's life... it's a snippet of what I was going through or what I was feeling... and I've put it down in a certain way at that time, but sometimes you can analyse every nuance of a song and worry about what everybody is going to think, rather than accepting that, like every artist, I'm always growing and honing in on my art. And I do the same thing with my photography... it's tempting to over-edit an image because you think it will somehow make it better, but in the end it's about feeling something. A lot of what you might add is actually unnecessary.”

Balancing the technical and the creative is always the challenge. You need to have some technical ability – even a lot – in order to be able to get where you want to go creatively... but, on the hand, you don't want the technicalities getting in the way.

“It's exactly the same in music,” says Guy Sebastian. “If you understand the tools and things that you are able to use, there are so many more options as far as what you can achieve, because what you hear you can actually execute... and I think it's the same with photography. But then they are just tools. I'm now trying to cut down on how much post-production I do because you can get so caught up in the process that you lose the real essence of the original image.

“It's easy to mess up something beautiful. It's a really, really fine line. There's the purist perspective of, ‘no, don't mess with it, it's pretty good’, and then there's the perspective of that, well, it *could* be more. And then there's the fact that you've overdone it... you've taken something beautiful and you've messed it up... your intentions were good, but...”

In photography we talk about looking without seeing... Guy contends that in music, you can listen without hearing.

“It's like wishing you'd written that song. As a songwriter, sometimes I'll collaborate with producers and they'll have beds of music that I flick through, say, ten tracks and only one of them will stand out, but the others I just can't hear a melody over. Then suddenly I'll hear one of them on the radio because somebody has written a smash to it and I'll think,

“It's tempting to over-edit an image because you think it will somehow make it better, but in the end it's about feeling something. A lot of what you might add is actually unnecessary.”



'Oh, now I can hear it', but by then it's too late. So it's about being receptive and about not coming in with a whole lot of preconceived ideas. So with my photography, especially landscapes, I'll plan ahead – because I have to with my schedule. But then there are the pictures that just happen... when something just moves me. That

“

I'm now trying to cut down on how much post-production I do because you can get so caught up in the process that you lose the real essence of the original image

emotional element is really what makes a great song... or a great photograph.”

Anonymity Abroad

Guy has subsequently developed an interest in portrait photography, although given his celebrity status this is something he mostly pursues when he's travelling overseas.

“It was a nice escape for me because of the anonymity of being abroad was a real novelty. In Australia I can't just rock up to somebody in the street and say 'I think you look amazing and I love your face, can I take your portrait?' The newspaper headlines the next day would be something like, 'Guy Sebastian, The Reverse Paparazzi!' Travelling overseas allows me to photograph people without getting strange reactions.”

The positive side to Guy's celebrity is that he has access to plenty of other showbiz personalities and he's photographed his fellow *X Factor* judges – including the program's British creator, Simon Cowell – as well as many of the contestants.





GUY SEBASTIAN PROFILE

PROFILE GUY SEBASTIAN



"Actually, I've only come to realise quite recently that these are great opportunities for photographs that not many other people have... so I'm trying to do a lot more of it whenever the chance comes up."

Guy shoots mainly with a Canon EOS D-SLR system and describes the 24-70mm f2.8 L Series zoom as his "workhorse lens", but for portraiture he favours either the 85mm f1.2 or the 50mm f1.2. Of the 85mm he comments, "I just love it. It's such a crisp lens – there's so much glass – and it gives such a beautiful look."

More recently, he's been experimenting with the EOS M3 mirrorless camera – because he likes the idea of its small size. But he confesses, "The jury is still out for me on that camera. I like it, but I really find it hard to use anything other than my D-SLR... I'm just so comfortable with it

now. But then I really do love the smaller size too."

Destinations for photography on Guy's 'bucket list' include Canada and Alaska, "...and then some warmer places. I really want to go to India. My mum's from India, but I've still never been and I think it would be amazing photographically."

He expresses no particular preference for either colour or B&W, but says, "Black and white is just so nostalgic. I'll keep something colour when I find the colour can't be lost. There are certain images where the colour is so crucial and converting it to black and white just doesn't do anything. But sometimes you'll convert an image – and it's usually portraits – and it just absolutely works. Again it's all about creating emotion and, for me, that's always the ultimate objective... in both my songs and my photographs." 🎸

SOUND CHANGES EVERYTHING

THE ZOOM Q8

HD VIDEO + FOUR TRACK AUDIO
WITH INTERCHANGEABLE MIC CAPSULE SYSTEM



DIGITAL VIDEO CAMERA
OF THE YEAR
ZOOM Q8



The world's best-sounding video camera.

MISTS IN TIME

The Picture

Lake Tekapo on the South Island of New Zealand is a picturesque locality with the Church of the Good Shepherd a popular tourist stopover. Around midday, a lingering autumn mist finally started to break away. In about ten minutes the sky was clear which meant a very busy photo session trying to capture the lifting mist and strengthening sunlight. Finding some useful foregrounds to take the eye to the mountains was important.

The Photographer

As well as being this magazine's digital printing expert, Trevern Dawes is an accomplished photographer and writer and his many ventures into publishing have included a photographer's guide to the many beautiful locations in New Zealand.

The Equipment

A Canon EOS 5D Mark II fitted with a general purpose 24-105mm zoom. There was no time to set up a tripod when several vantage points were envisaged. RAW file capture. Aperture priority auto exposure control at f11, manual focus (i.e. zoom in, set focus, zoom out). At ISO 200 the light was strong enough for shutter speeds which allowed hand-held shooting.

The Technique

In situations that will only last a few minutes, there is little time to be thinking about technical matters. A standard camera routine allows everything to be concentrated on framing the scene. Shoot a few images, move on to other locations and, if time permits, return and repeat.



PRESENTED BY

ILFORD

www.ilford.com

Ph: (03) 9823 1555
for more information

ILFORD
BLACK & WHITE

ILFORD
GALERIE
PROFESSIONAL INKJET PHOTO RANGE



How It Was Done

The Church of the Good Shepherd may be a major attraction, but very people wander down to the lake's shoreline. In a breaking mist, the church is exactly where you'd want the visitors to be, rather than at the shoreline. The ultimate situation was always going to be plenty of mist, the distant mountains visible and hints of sunlight all viewed from a useful vantage point. Somewhat unpredictable and yet another landscape challenge. A series of shots were taken until the scene no longer had any impact.

Tricks Of The Trade

Even in the most photographed places there is the potential for something different beyond the clichés. The lifting of the mist was a brief opportunity to capture romantic landscapes. Believe it or not, but critical moments do exist in landscape as much as they do in other photographic ventures... so it all comes down to anticipation and timing.

Degree Of Difficulty (Out of 10)

'Right place, right time' is the catch cry for landscape photography, whether it's by sheer chance or by deliberate planning and perseverance. To find the same conditions on another visit to Tekapo would require a fair measure of luck. Perhaps a more suitable foreground could be found so let's allocate a '9' and leave that possibility as a means of securing the ultimate.

Can You Try This At Home?

New Zealand has spectacular scenery that is great to experience yet can be difficult to find something beyond the general run of photographs. By comparison, our home and surrounding neighbourhood may seem mundane and uninspiring, but when something special eventuates the same principals apply as for those grand scenic shots – recognise, react and rejoice when you know it's right and you have done your best.

OLYMPUS

OM-D E-M10 MARK II

REPORT BY PAUL BURROWS



DIALLED IN

Already an absolute gem of a camera, Olympus has made its entry-level OM-D model even more enticing with a restyled design that's pure OM in spirit, and some significant upgrades to its capabilities.

The E-M10 II's restyling brings it even closer in looks to the original OM cameras. Main bodyshell covers are magnesium alloy.

with the size. None of the OM-D bodies are exactly bulky, but the new Mark II E-M10 is trimly petite... just like the classic OMs. Furthermore, the styling is even closer to, say, and OM-3 or OM-4, helped along by a fairly significant revising of the control layout which further emphasises the dial theme. Put simply, the E-M10 II is a pretty little thing – even more so than its predecessor – and this was always a key attraction of the legendary 35mm cameras. If you were buying on looks alone, the E-M10 II would beat all comers in the mirrorless world, but just like its predecessor, its beauty is more than skin deep.

Despite the many attractions of the higher-end OM-D models, we still crowned the original E-M10 as the pick of the litter for its hard-to-beat combination of size, styling, features, performance and price. In the fast-moving mirrorless camera

If you haven't already made the move to mirrorless, the ongoing activities of both Olympus and Panasonic – as well as a growing choice of lenses from a variety of makers – give the Micro Four Thirds format plenty of ammunition to combat the

larger sensor alternatives. If it's enough to convince you of MFT's merits, then the choice between Olympus and Panasonic is a little harder to pin down – the latter has demonstrated a remarkable capacity for giving photographers exactly what they want, but if you have any sense of camera design heritage and aesthetics, then the

former's OM-D Series models tick all the right boxes.

Each successive OM-D model seems to channel the spirit of the legendary OM System 35mm SLRs more definitively than before and the second generation of the entry-level E-M10 is arguably the closest re-incarnation yet. It certainly has something to do

market, crowns aren't worn for long and since then Olympus has updated the E-M5 and upgraded the flagship E-M1 while Panasonic has been equally busy across its Lumix range. Yet, the E-M10 has held up well, with a bit of price snipping helping it hang onto its value-for-money edge. And now there can be an orderly succession because, if anything, Olympus has made the Mark II model even more of an appealing all-rounder.

It starts with the restyle – which we'll get to in a minute – but also includes important improvements to key elements such as the electronic viewfinder, the image stabilisation system and the autofocus functionality, along with a myriad minor revisions which all add up to a more capable package across the board.

BETTER VIEW

The restyle mostly involves the control layout, but the central housing for the pop-up flash and viewfinder has been reshaped so it's slightly broader and looks more like that of an OM 35mm SLR while, similarly, a lip has been added to the edge of the top panel which is straight from the OM-1 lineage.



EACH SUCCESSIVE OM-D MODEL SEEMS TO CHANNEL THE SPIRIT OF THE LEGENDARY OM SYSTEM 35MM SLRs MORE DEFINITELY THAN BEFORE AND THE SECOND GENERATION OF THE ENTRY-LEVEL E-M10 IS ARGUABLY THE CLOSEST RE-INCARNATION YET.

There's now an OM-1/2-style power on/off lever which sits where the main mode dial used to be on the Mark I model. On the new camera, the dial has swapped sides and, to make way for it, the front and rear input wheels have been re-aligned so they're no longer so off-set. They've also been reduced in size and have classically knurled rims – as does the main mode dial – so the top panel is almost pure 1970s in appearance save for two 'Fn' buttons and the video start/stop button. Better still, it delivers much improved ergonomics, especially in terms of changing exposure settings on-the-fly.

The EVF was one of the few areas where the original E-M10 did seem a bit low-rent, but its basic 1.44 megadots LCD panel has been replaced with an OLED-type display boasting a much higher resolution of 2.36 megadots and an increased magnification of 1.23x (equivalent to 0.62x in 35mm format terms). The improvements in sharpness, detailing, colour

reproduction, dynamic range and responsiveness are all significant... and especially noticeable compared to the previous model.

The EVF has its own custom menu and here you can configure the display to one of three styles and add elements such as a real-time histogram, dual-axis level display, highlight and shadow warnings and a grid guide (chosen from a selection of four patterns). Usefully, you can configure the EVF independently of the monitor – although all the same elements are available for the latter too – and there's a new setting called the 'Simulated Optical Viewfinder' (S-OVF). This essentially extends the dynamic range – and obviously switches off the preview functions – to replicate the look of an optical finder. The dynamic range expansion is actually quite dramatic, but it's surprisingly how quickly we've become accustomed to using either the EVF or the monitor as a visual guide for exposure and white balance. Using S-OVF you have to go back to the

traditional method of relying on the read-outs (although you can still sneak a peek at the monitor screen).

Auto and manual switching is available between the EVF and the monitor, and the latter remains the same tilt-adjustable TFT LCD panel as before which has a resolution of 1.037 million dots and touch controls. A new addition to these is called the 'AF Targeting Pad' which is Olympus's version of Panasonic's 'Touchpad AF' function (as on the G7 and GX8) and works in the same way, allowing you to move the AF point around via the touchscreen while using the EVF for framing and composition. Using your grip hand's thumb is the most comfortable way of working, and this is a much more convenient and efficient arrangement than fiddling around with four-way navigator keys.

As before, the monitor also provides the 'Super Control Panel' for direct access to a long list of capture-related functions. The individual functions can be



selected via touch control, but the subsequent settings are made via the front or rear input wheels. While on operational matters, the Mark II E-M10 retains the same menu design as its predecessor – and current siblings – which means just about everything beyond a few basics is done via an extensive Custom Menu and the Shooting Menu is actually quite small. It's the opposite of the way most camera manufacturers do things, but obviously you will get used to it if you're actually living with the camera on a daily basis.

STEADY ON

Like the rest of the OM-D family, the E-M10 II employs sensor-based image stabilisation, but it now corrects for movement in five directions rather than the previous model's three.

This is the same as for the E-M5 II and flagship E-M1, but it isn't quite same system as the maximum range of correction is four stops rather than five. Nevertheless, this is still a big improvement and, as on the E-M5 II, when shooting video there's the option of using a combined 'Sensor-Shift and Digital IS' mode which is particularly effective when



using the camera hand-held. Digital IS shifts the image area across the sensor (achieved via a small crop) to provide additional correction. The rest of the E-M10 Mark II's video capabilities are outlined in the separate Making Movies panel.

The sensor itself is the same 17.2 megapixels Micro Four Thirds

size 'Live MOS' device as used on the previous model. It goes without an optical low-pass filter (LPF) in order to optimise the resolution. It's mated by the same 'TruePic VII' processor as before, although no doubt there have been some tweaks to various elements of performance. For example,

there's a modest increase in the maximum shooting speed which is now 8.5 fps (versus 8.0 fps) with the AF and AE locked to the first frame while Full HD video recording is now possible at 50 fps with progressive scan. With continuous AF/AE adjustment the top speed increases to 4.3



Initially video didn't seem to be

a particularly big priority for Olympus on its D-SLRs and then on the Digital Pen mirrorless cameras, but all that changed with the OM-D E-M5 Mark II and the new version of the E-M10 follows suit. It has virtually the same video package as its bigger brother which means this is a big step up from what was offered on the original model. It also means that the E-M10 Mark II offers an exceptional level of video functionality for its comparatively low price tag.

As noted in the main text, it has the 'OM-D Movie' image stabilisation options which include one that combines both the five-

axis sensor-based correction with image shifting to enable smoother hand-held shooting. The electronic stabilisation involves applying a small crop of the sensor image prior to downsampling.

Full HD shooting is available at all frame rates (in all TV standard regions) with progressive scan – 60 fps, 50 fps, 30 fps, 25 fps and, crucially, 24 fps – with the option of All-Intra intraframe or IPB interframe compressions regimes (although All-I is only available at 30 fps, 25 fps or 24 fps when shooting at FHD). All-I compression optimises image quality – and is really the only option is you're planning to do a lot of editing – while IPB delivers smaller, more manageable files. With All-I compression, the bit rate is an impressive 77 Mbps and when using IPB it's still a very acceptable 52 Mbps. Importantly, an uncompressed and 'clean' video feed (8-bit, 4:2:2 colour

and 24 fps, 25 fps or 30 fps) is available at the camera's HDMI terminal for recording to external devices.

The E-M10 II doesn't shoot at 4K except for time-lapse sequences (which can be up to 999 frames), but the playback speed is limited to 5.0 fps so it's hard to see this being of much practical use. In comparison, when shooting full motion video, the camera offers a host of control options including manual control of apertures and/or shutter speeds, all 14 'Art Filters', the 'Colour Creator' adjustments, and a selection of five 'Movie Effect' settings (Art Fade, Old Film, Multi Echo, One Shot Echo and Multi Teleconverter). The E-M10 II can also add time-coding to footage and provides a seamless transition to a new file when the usual 4.0 GB size limit is reached. A new feature is called 'Clips' and allows for up to 99 short clips – of

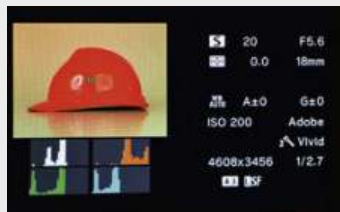
two, four, six or eight seconds duration – to be quickly and easily assembled in-camera, similar to Panasonic's 'Snap Movie' function.

The focus peaking display is available in the same choice of four colours and three intensities as for stills, and there's the option of having a real-time histogram and one of the grid guides.

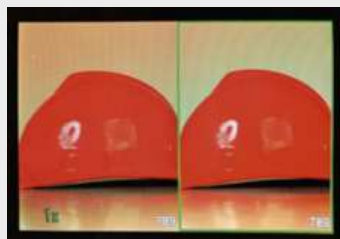
On the audio side, the E-M10 II has built-in stereo microphones and provisions for manually controlling the recording levels (with a 20-step range). There's also a volume limiter and a switchable wind noise filter, but still no stereo audio input which seems a bit curious given the upgraded capabilities elsewhere. There doesn't appear to be a workaround at present and it will be a limiting factor for the serious videographer... despite the real appeal of the rest of the package. Clearly Olympus wants these users to head for the E-M5 Mark II.



The live view screen can be configured for dual-axis levels displays (top), a real-time histogram and guide grid (centre), and an additional info displays (bottom).



Replay screen options include a thumbnail with a set of histograms or a brightness histogram superimposed over a full image.



'Light Box' display provides side-by-side comparisons of two images with zooming which is particularly handy for checking focus.

fps from 3.5 fps. New is a silent shooting mode made possible by the inclusion of a sensor-based shutter which also gives a top shooting speed of 1/16,000 second (versus 1/4000 second for the conventional shutter). The sensor's sensitivity range remains the same at ISO 200 to 25,600 with a one stop 'pull' to ISO 100.

The AF and AE systems are also unchanged; the former is Olympus's 'FAST AF' contrast-detection system which employs 81 measuring points – arranged in a 9x9 pattern – with auto or manual point selection, and the option of setting a nine-point cluster for wider-area coverage. There's both auto tracking and face-detection, the latter switchable to eye-detection and further refined to catch either the right or left eye. There's also the option of combining the single-shot AF mode with a continuous manual override, and full manual focusing can be assisted by a magnified image (five settings up to 14x) or a focus peaking display. The latter is now available in an expanded choice of colours – red, yellow, white or black – and High, Normal or Low intensity settings.

Exposure control is based on Olympus's 324-point 'Digital ESP' multi-zone metering with the choice of centre-weighted average or spot measurements. Continuing a long Olympus tradition (from the OM-4, in fact), the spot metering can be biased towards either the highlights or the shadows. Additionally, there's an 'Exposure Shift' adjustment which fine-tunes each of the metering modes over a range of +/-1.0 EV in 1/6-stop increments.

The standard auto exposure control modes can be overridden via an AE lock, up to +/-5.0 EV of compensation or auto bracketing which can be set to shoot sequences of two, three, five or seven frames with adjustments of either +/-0.3, 0.7 or 1.0 EV per frame. As before, there's a selection of auto bracketing modes with, in addition to exposure, settings for white balance, flash, ISO and 'Art Filter' special effect plus a new one for focusing. Focus bracketing can be set for sequences of up to 999 shots (!) with a focus differential adjustment from Narrow to Wide over ten steps. Long sequences are also

possible with the 'Art Filter' bracketing which can also include the camera's 'Picture Mode' presets so you could potentially end up with 21 variations of an image.

COLOUR AND CONTRAST

The E-M10 II has two new 'Art Filter' effects – called Vintage and Partial Colour – bringing the total selection to 14. Additionally, the choice of 'Art Effects' is expanded to nine (from seven) and these are variously added to the original effect... which themselves are mostly adjustable too. The six 'Picture Mode' presets are unchanged and the five colour modes have adjustable parameters for sharpness, contrast, colour saturation and tonal gradation. This last parameter can be set to Normal, Auto, High Key or Low Key. The Monotone 'Picture Mode' is adjustable for contrast, sharpness and gradation, plus there's a set of contrast control filters (yellow, orange, red and green) and a choice of toning effects (sepia, blue, purple or green). You can store one modified 'Picture Mode' as a custom preset.

Supplementing the standard 'PASM' exposure control modes are 25 subject/scene modes plus the 'iAUTO' full auto mode which provides auto scene mode selection. A selection of basic manual overrides called 'Live Guides' are available when shooting in 'iAUTO' and these provide some control over colour saturation, colour balance, brightness, background blur and the blurring/freezing of movement.

The 'Live Guides' are accessed via a touch tab on the live view screen and the adjustments are subsequently applied via slider-type controls which are also operated by touch.

For the more experienced user, there's the 'Colour Creator' function and 'Highlight & Shadow' control, both of which perform like built-in Photoshop tools, namely the Saturation/Hue and Curves adjustments.

When the 'Colour Creator' is selected, the front input wheel adjusts the hue and the rear wheel varies the saturation which, of course, can be monitored in live view. The 'Highlight & Shadow' control allows you to adjust the brightness of the highlights and/or the shadows around a central point. The front wheel tweaks the highlights while the rear dial works on the shadows.

The E-M10 II also has multi-shot HDR capture (with both auto and manual modes), in-camera panorama stitching, a multiple exposure facility (with auto exposure correction), an intervalometer for recording time-lapse sequences and in-camera processing of RAW files. There's also a 'Live Composite' mode which, after a base exposure is set (between 1/1.3 to 60 seconds), maintains the brightest elements of the image (say, for example, fireworks or stars) to avoid overexposing them while capturing multiple exposures over a period of up to three hours. With each successive exposure you can watch the image being 'built' on the monitor screen as is the case with 'Live Bulb' and 'Live Time'

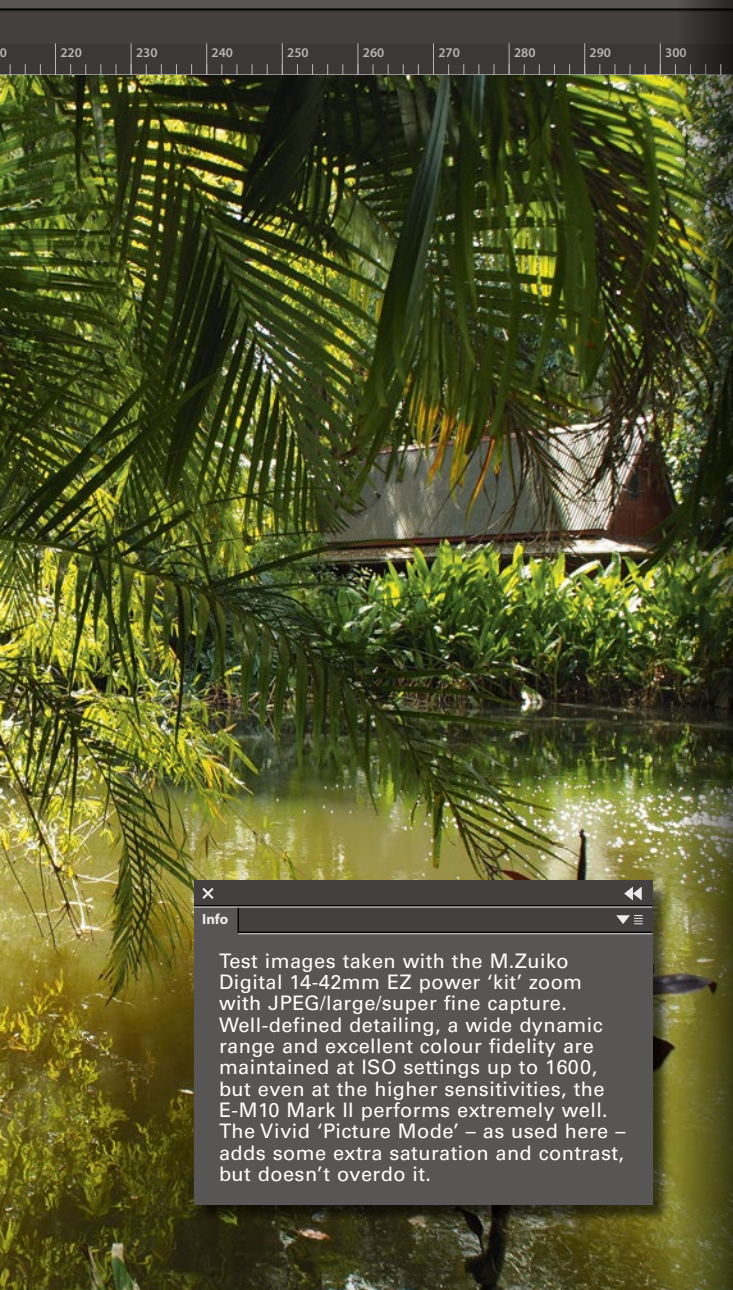
The monitor screen tilts and is the same 1.037 megadots TFT LCD panel as was used on the previous model.



X img_2445.jpg@100%(RGB/8#)



100% Doc: 2.8mb



modes which work with the shutter's 'B' and 'T' settings. Both allow for exposures of up to 30 minutes, and the image display intervals are variable.

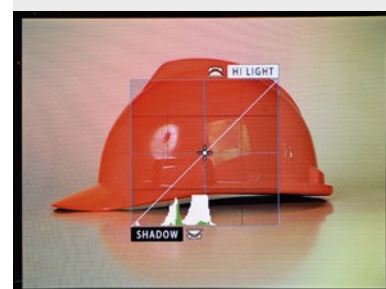
The white balance control options comprise auto correction (with a 'Keep Warm Colour' option for use when shooting under tungsten lighting), a choice of seven presets (including for underwater), provisions for storing up to four custom measurements, and manual colour temperature control (over a range of 2000 to 14,000 degrees Kelvin). As always, Olympus does its own thing here; calling the custom measurements "one-touch white balance", and the manual colour temperature settings "custom white balance". Fine-tuning is available for all the presets, the four custom measurements and both auto modes.

Despite being ultra-compact in size, the E-M10 Mark II still packs in a built-in flash which is concealed in the central housing and popped up by pushing the OM-style power on/off lever forward another notch. It has a metric guide number of 8.2 (at ISO 200) which is a little more powerful than before and it can serve as the commander in a wireless TTL flash set-up (a feature Olympus originally pioneered on its D-SLRs). Alternatively, manual control is available with an adjustable output down to 1/64. The shooting modes include fill-in, slow speed sync and second curtain sync. The maximum flash sync speed is 1/250 second.

UNDER REVIEW

Post-capture, the E-M10 II's in-camera editing functions for JPEGs comprise Shadow Adjust (for dynamic range expansion), Red-Eye Fix, Aspect, B&W, Sepia, Saturation, Resize and e-Portrait. The 'Art Filter' effects aren't available for application post-capture.

The image review/replay screens can be configured to include a thumbnail image with a full set of histograms (i.e. brightness and RGB channels), a larger brightness-only histogram superimposed over the image, highlight and shadow warnings and a 'Light Box' display for the side-by-side comparison of two images (complete with zooming which is very handy for checking focus). The thumbnail pages comprise four, nine, 25 or 100 images plus a calendar display, but as with the replay screens, you can choose which ones you want to be available via the Custom Menu. Touch controls are available for browsing, zooming and scrolling through the thumbnails. Like its predecessor, the E-M10 II has a built-in



'Highlight & Shadow' control allows the brightness of the highlights and/or the shadows to be adjusted around a central point... in a similar fashion to Photoshop's Curves.



Thumbnail pages can be configured to four, nine, 25 or 100 images plus a calendar display. You can preselect any combination you want via the Custom Menu.



The Custom Menu is extensive and includes a page dedicated to the EVF's settings.

WiFi module for image transfer, remote control of various functions and a live view feed. Instead of using NFC for easier connecting with mobile devices, the camera generates a QR code which is scanned via the O.I. Share app to configure the set-up.

Both the Android and iOS operating systems are supported and even some of the touch controls transfer to the device, including autofocus and shutter release.

SPEED AND PERFORMANCE

Loaded up with our reference memory card – Lexar's Professional 64 GB SDXC format UHS-I speed device – the E-M10 II captured a sequence of 25 JPEG/large/super fine frames in 2.922 seconds, representing a shooting speed of 8.55 fps... which pretty much

nails Olympus's quoted spec. For the record, the average file size was 8.2 MB.

Although the autofocus is via contrast-detection measurement, in the single-shot mode it's fast and reliable, especially when using either face- or eye-detection when it locks onto the subject in an instant. In continuous mode, the focus tracking is reasonably capable, but not in the same league as the hybrid systems using phase difference-detection. Olympus's 'Digital ESP' metering is now well-proven and continues to deliver accurate exposures with the E-M10 II, even in challengingly contrasty situations.

The original camera delivered exceptional performance and, given it shares pretty much the same hardware here, the Mark II model does likewise, although it's

likely there's been some software-related tweaks between the two models based on user feedback. As before, the superfine quality JPEGs exhibit high levels of crisply-defined detailing and very smooth tonal gradations. Again the dynamic range is wider than might be expected for a smaller-sized sensor. The colour reproduction is excellent, but of course there's plenty of scope for fine-tuning here via the 'Picture Control' presets. Vivid, in particular, delivers really punchy images with boosted saturation and contrast, but without overdoing it.

Noise levels remain acceptably low up to ISO 3200 and both the ISO 6400 and 12,800 settings are still usable, but exhibit some graininess in the areas of continuous tone while there's a small loss of definition. As we've

noted with all the OM-D models, the MFT imaging performance doesn't give anything away to the rival CSCs with a larger 'APS-C' sensor, especially in terms of the high ISO capabilities.

THE VERDICT

We really loved the original E-M10 and the Mark II model has even more appeal thanks, for starters, to its revised styling and ergonomics which make it even closer in spirit to one of the classic OM 35mm SLRs. It's unquestionably the prettiest mirrorless camera on the market – even more so than the E-M5 II and the sheer smallness really does make the most of the configuration... further enhanced by the EVF's major upgrade which is also another big plus.

We also picked the first E-M10 as the pick of the OM-D

litter – particular in terms of its value for money – but now there's much stiffer competition in the shape of the brilliant E-M5 II so it's harder to be quite so definitive. Nevertheless, the E-M10 Mark II still stands out as far as great value is concerned which makes it easier to contemplate as a second system if you're not quite ready to give up your D-SLR just yet. It makes a brilliant travel camera, for example – especially with the 'pancake' 14-42mm power zoom – and certainly has everything the enthusiast-level shooter is going to want, backed up by a superlative imaging performance. But the bottom line is that it's even more intuitive and enjoyable to use even with the menu system's idiosyncrasies so it's more likely to be your 'go to' camera no matter what you're shooting. 📸

VITAL STATISTICS



OLYMPUS OM-D E-M10 MARK II \$999

with M.Zuiko Digital 14-42mm f3.5-6.3 EZ ED MSC zoom lens.

Type: Fully automatic, interchangeable lens digital camera with Micro Four Thirds System bayonet lens mount.

Focusing: Automatic 81-point wide-area using contrast-detection measurement via the imaging sensor. Focus points may be selected manually or automatically by the camera. Manual switching between one-shot and continuous AF modes. Face/eye detection and auto tracking. Continuous manual override available with single-shot mode. Focus assist via magnified image (3x/5x/7x/10x/14x) and focus peaking display (Red, Yellow, White or Black; High, Normal or Low intensity).

Metering: 324-point 'Digital ESP' (i.e. multi-zone), centre-weighted average, spot (2.0%) with highlight/shadow bias, and TTL flash. Metering range is EV -2.0 to 20 (ISO 100/f2.8).

Exposure Modes: Continuously-variable program with shift, shutter-priority auto, aperture-priority auto, metered manual, TTL auto flash and TTL flash. Plus 25 subject/scene programs. Automatic scene detection in 'IAUTO' mode.

Shutter: Electronic, vertical travel, metal blades, 60-1/4000 second plus B and T (both up to 30 minutes). Flash sync to 1/250 second. Exposure compensation up to +/-5.0 EV in 1/3, 1/2 or full stop increments.

Viewfinder: EVF OLED-type with 2.36 megapixels resolution, 100 percent coverage and 1.23x magnification; or tilt-adjustable 7.62 cm TFT LCD monitor panel (1.037 megapixels) with touch screen controls. Both have scale/grid, real-time histogram and info displays plus a zoom function. Auto/manual switching between EVF and monitor. EVF has 'Simulated Optical Viewfinder' (S-OVF) setting which mimics the appearance of an optical finder.

Flash: Built-in pop-up unit with GN 8.2 power (ISO 200/metre). Auto, fill-in, red-eye reduction, front/rear sync and slow speed sync modes plus TTL wireless flash control. Flash compensation range of +/-3.0 EV in 1/3 stop increments. Manual control down to 1/64 of full power. External flash units connect via hotshoe.

Additional Features: Magnesium alloy bodyshell, AE/AF lock, auto exposure bracket-

ing (up to +/-1.0 EV over two, three, five or seven frames), depth-of-field preview, programmable self-timer (1 to 30 second delays, 1 to 10 frames, variable intervals), audible signals, auto power-off, hard-wired remote triggering, silent shooting mode, 'Anti-Shock' low-speed continuous shooting mode (using sensor shutter), 104 custom functions.

DIGITAL SECTION

Sensor: 17.2 million (total) pixels Live MOS with 17.3x13.0 mm imaging area and 4:3 aspect ratio. No low-pass filter. Sensitivity equivalent to ISO 200-25,600 (extendable to ISO 100).

Focal Length Magnification: 1.97x.

Formats/Resolution: Four JPEG compression settings, RAW output (lossless compression) and RAW+JPEG capture. Eight resolution settings (four set at any one time) at 4:3 aspect ratio: 4608x3456, 3200x2400, 2560x1920, 1920x1440, 1600x1200, 1280x960, 1024x768 and 640x480 pixels. Eight resolution settings (four set at any one time) at 3:2 aspect ratio: 4608x3072, 3216x2144, 2544x1696, 1920x1280, 1584x1056, 1296x864, 1008x672 and 624x416 pixels. Eight resolution settings (four set at any one time) at 16:9 aspect ratio: 4608x2592, 3200x1800, 2560x1440, 1920x1080, 1536x864, 1280x720, 1024x576 and 640x360 pixels. Eight resolution settings (four set at any one time) at 1:1 aspect ratio: 3456x3456, 2400x2400, 1920x1920, 1440x1440, 1216x1216, 960x960, 768x768 and 480x480 pixels. 24-bit RGB colour for JPEGs, 36-bit RGB colour for RAW files. RAW files captured at 4608x3456 pixels.

Video Recording: Full HD at 1920x1080 pixels; 60, 50, 30, 25 or 24 fps and 16:9 aspect ratio, MOV format with MPEG-4/H.264 AVC compression. Fine and normal quality modes. HD at 1280x720 pixels, 50 fps or 25 fps and 16:9 aspect ratio, MOV format with MPEG-4/H.264 AVC compression. Superfine, fine and normal image quality modes with IPB compression, or ALL-Intra compression. HD at 1280x720 pixels, 25 fps and 16:9 aspect ratio, AVI format with

Motion JPEG compression. Built-in stereo microphones with adjustable levels and a wind filter. Maximum recording time is 29 minutes and 59 seconds, but a new file is automatically started when the 4.0 GB size limit is reached. Movie clips limited to 2.0 GB file size in AVI. **Video Features:** Five 'Movie Effects' (Art Fade, Old Film, Multi Echo, One Shot Echo and Movie Tele Converter), 'Clips' mode (up to 99 short clips – maximum of eight seconds – assembled in-camera), 'Movie+Photo' mode, silencing function, time lapse recording, time code support, hybrid sensor shift/electronic image stabilisation.

Recording Media: SD/SDHC/SDXC memory cards with UHS-I and UHS-II support.

Continuous Still Shooting: Up to 79 frames at up to 8.5 fps (JPEG/large/super fine) or up to 41 RAW frames. Low speed continuous shooting at 4.3 fps with continuous AF/AE adjustment.

White Balance: TTL measurement via image sensor. Auto measurement, auto warm, seven presets and four custom settings. White balance compensation (amber-to-blue and/or green-to-magenta) in all presets plus white balance bracketing over three frames. Manual colour temperature setting from 2000 to 14,000 degrees Kelvin.

Interfaces: Multi-connector (USB 2.0 and NTSC/PAL composite video) and micro HDMI (Type D).

Additional Digital Features: Body-based image stabilisation with five-axis correction, built-in sensor cleaning, dual-axis level display, Adobe RGB and sRGB colour spaces, long exposure noise reduction (Auto, On, Off), high ISO noise filter (Off, Low, Standard, High), six 'Picture Modes' (i-Enhance, Vivid, Natural, Muted, Portrait and Monotone), one user-defined 'Picture Mode', adjustable 'Picture Mode' adjustments (Contrast, Sharpness, Saturation and Gradation – Auto, Normal, Low-Key, High-Key), Monochrome mode has four contrast filters and four toning effects, 'Colour Creator' function, 'Highlight & Shadow' control, 14 'Art Filter' effects applied at capture (Pop Art, Soft

Focus, Pale & Light Colour, Light Tone, Grainy Film, Pin Hole, Diorama, Cross Process, Gentle Sepia, Dramatic Tone, Key Line, Watercolour, Vintage and Partial Colour), nine 'Art Effects' (Soft Focus, Pin Hole, Frames, White Edges, Starlight, Filter, Tone, Blur and Shade Effect – availability varies according to the filter effect), 'Photo Story' function (five patterns), multiple exposure facility (with auto exposure adjustment), intervalometer (up to 999 frames), auto bracketing modes (AE, WB, ISO, flash, 'Art Filters' and focus), 'sweep' panorama mode, multi-shot HDR capture (two auto modes, five manual settings for three, five or seven frames), 'Live Composite' mode, 'Live Time' and 'Live Bulb' modes, 'Super Control Panel' screen, highlight and shadow alerts (adjustable thresholds via histogram), guide grids (choice of four), 'Shading Compensation' vignetting correction, 'Keystone Compensation' correction, long exposure noise reduction, high ISO noise reduction, adjustable image display time, auto image rotation, slide show (with a choice of music and transitions), playback zoom (up to 14x), 4/9/25/100/calendar thumbnail displays, calendar thumbnail display, index display, 'My Clips' display, 'Lightbox' side-by-side comparison display, in-camera editing functions (Shadow Adjust, Red-Eye Fix, Aspect, B&W, Sepia, Saturation, e-Portrait and Resize), in-camera RAW-to-JPEG conversion, in-camera RAW image overlay, copyright info, DPOF and PictBridge support, built-in WiFi module.

Power: One 7.2 volt/1210 mAh rechargeable lithium-ion battery pack (BLS-5 type).

Dimensions (WxHxD): body only = 119.5x83.1x46.7 mm.

Weight: body only = 350 grams (without battery pack and memory card).

Price: \$799 body only. \$999 with M.Zuiko Digital 14-42mm f3.5-6.3 EZ ED MSC zoom lens. \$1199 for twin lens kit which adds M.Zuiko Digital 40-150mm f4.0-5.6 R telephoto zoom. Available in black or silver.

Distributor: Olympus Imaging Australia Pty Ltd, telephone 1300 659 678, or visit www.olympus.com.au

A SMALL **LOGO** MAKES A BIG **DIFFERENCE**

5 CONTINENTS **28** MAGAZINES **40** AWARDS



25 years

Since 1991 the TIPA Awards logos have been showing which are the best photographic, video and imaging products each year. For 25 years the TIPA awards have been judged on quality, performance and value; making them the independent photo and imaging awards you can trust. In cooperation with the Camera Journal Press Club of Japan. www.tipa.com



The UBH35 is the smaller of the two UniqBall models but still supports a load of up to 15 kilograms. Both models are made from aerospace-grade aluminium alloy.

BY PAUL BURROWS

Anybody who uses a tripod on a regular basis will know that even the very good ones can still be frustratingly cumbersome to set up. The main problem with achieving accurate levelling often involves numerous adjustments of each leg's extension... and even then you'll still find that you've ended up with a bit of a slope. A popular 'short cut' has been the use of a spirit level on the tripod head which certainly allows for re-tuning of levels, but means you have to go without the tilt and pan movements of a conventional head. The UniqBall head is only absolutely level in one position.

So what if you could have the best of both worlds? Well, you can with the UniqBall. Most of us had never heard of the UniqBall until this year's TIPA Awards judging session.



The outer ball is used to establish a level setting, aided by the bubble level.



The inner ball provides tilt and pan movements, always staying on the level plane set by the outer ball. Tensioning is adjusted via the red-coloured knob.

ON THE LEVEL

UNIQBALL TRIPOD HEAD

Winner of the Best Accessory category in this year's TIPA Awards, the Hungarian-designed and manufactured UniqBall is a very clever piece of design which delivers real benefits.

when our Hungarian delegate, András Bánkúti from *Digitális Fotó* magazine, demonstrated the product to us. The judging panel was instantly impressed and, as a result, the UniqBall won the award for Best Accessory. It's been designed in Hungary and is also made there, but it's also being quickly discovered all around the world, including in Australia (where distribution is being handled by Mainline Photographics).

The UniqBall is indeed unique, but it's also a pretty clever piece of design straight from the why-hasn't-anybody-thought-of-it-before department. Essentially, the UniqBall comprises two balls, one set within the other. The outer ball works like a conventional ball head, enabling you to quickly and accurately obtain a level setting, aided by a built-in bubble-type level. It has a full range of movement. The inner, smaller ball – and here's the clever bit – then serves a levelled tilt-and-pan head. It's designed so it can rotate (i.e. for panning) and also tilt forwards or backwards, but it can't be moved in any way which would shift the level plane established by the outer ball (i.e. any sideways movements). So, no matter how you move the inner ball, the camera will stay levelled and, consequently, your horizons will stay straight. If the lens you are using has a tripod mounting collar then these operations are all preserved with the camera in the vertical (or portrait) orientation. Otherwise, as with all ball heads, you'll need an 'L' bracket.

If you want to return to the full 'free' movement of a ball head you simply lock off the inner ball and loosen off the outer ball. Simple.

SMOOTH OPERATOR

The ball-within-a-ball design obviously requires considerable precision and, apart from the fact that it really works, what's also particularly notable about the UniqBall is the exceptionally high quality of the manufacturing.

Aerospace-grade aluminium alloys are used and the balls just glide around with a silky smoothness that only comes from superior engineering (and aided by Teflon coatings). UniqBall says all the machining tolerances are to within 1/100th of a millimetre.



NO MATTER HOW YOU MOVE THE INNER BALL, THE CAMERA WILL STAY LEVELLED AND, CONSEQUENTLY, YOUR HORIZONS WILL ALWAYS STAY STRAIGHT.

The outer ball has a red anodised finish as does the locking knob for the inner ball so it's easy to visually differentiate between the controls. The clamp for the outer ball is actually operated via a lever rather than a clamp, presumably because this type of control allows you to exert a little more force, ensuring a rock-solid lock-off. Both controls allow for a progressive gradual release so you can precisely fine-tune the amount and degree of adjustment... particularly important when it's loaded up with a big D-SLR fitted with a big tele lens. And even with a heavier lens, the tensioning can still be nicely balanced between

enabling smooth movements and preventing the dreaded nose dive.

There are actually two UniqBall models. The UBH35 – as evaluated here – is the smaller of the two and weighs just 504 grams, but it can support a load of up to 15 kilograms. The UBH45 is 220 grams heavier and is a bit bulkier (roughly by 20 percent), but its load capacity goes up to a mighty 40 kilograms.

The camera plate on both is an Arca Swiss type clamp and also incorporates a bubble level. A bi-directional 'X Clamp' is available as an optional accessory (allowing the quick-release plate to be fitted in either the x or y axes... chiefly for when using an 'L' bracket) and there's also a 'PanoClamp' plate which rotates through a full 360 degrees.

QUICK SET

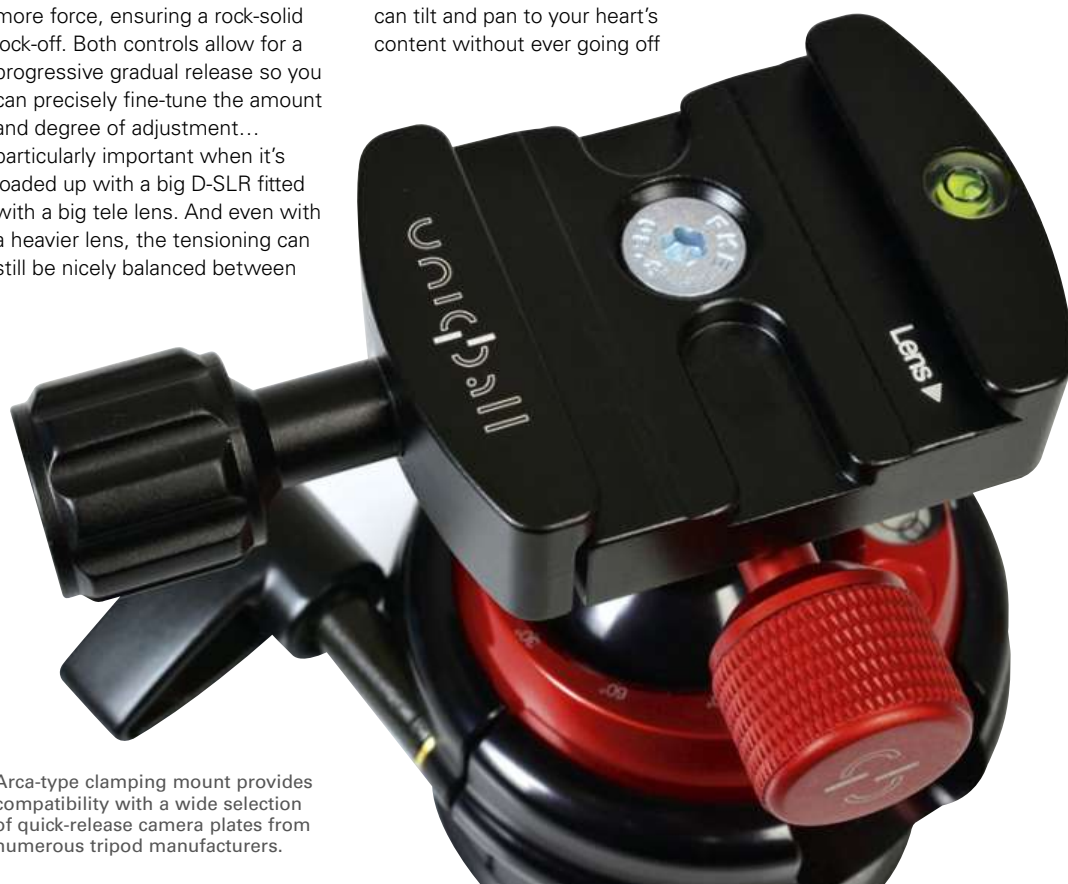
If you think the theory looks enticing, the practice is revelatory. You quickly realise that, A. just how much time you've wasted in the past trying to get everything level, and B. just how often, in the end, it still wasn't.

The UniqBall allows you get the job done in under ten seconds (usually quicker) and then you can tilt and pan to your heart's content without ever going off

level. As noted earlier, if you want normal ball head movements, that's easy too. And the UniqBall is just so beautifully made... dare I say it, with a smoother and even movement than the much-loved Arca Swiss Monoball B1 that I usually use. The UBH35 is also smaller and lighter than the Arca B1, although in load terms, the bigger UBH45 is actually a more relevant comparison. Nevertheless, for many photographers, especially those shooting with CSCs or compact D-SLRs, the smaller UniqBall will easily be up to the job.

There's been some comment in the media that they're expensive, but by high-quality, heavy-duty ball head standards, they're not at all. And the alternatives, such as the fiendishly complicated Arca Cube at \$2000+, or a gimbal mount are significantly pricier. The only warning here is that once you've sampled the UniqBall you simply won't want to go back to a conventional tripod head, either ball-type or tilt/pan.

The UBH35 is priced at \$495 and for more information visit www.mainlinephoto.com.au



Arca-type clamping mount provides compatibility with a wide selection of quick-release camera plates from numerous tripod manufacturers.



BEHIND
EVERY
POWERFUL
IMAGE IS A
POWERFUL
STORY...

September
Light Awards:
Pet's Personalities

Judge: Dr Chris Brown



Canon

Submit your entry at www.canon.com.au/lightawards



START TELLING YOUR STORY.

OVER
\$150,000
IN PRIZES TO
BE WON.



no one sees it like you

PENTAX K-S2

REPORT BY PAUL BURROWS



FIT FOR PURPOSE

Pentax maintains the D-SLR faith with another value-for-money model which offers a lot of higher-end features in an affordable and accessible package.

The K-S2 returns to rather more conservative styling compared to the flamboyant K-S1, and it's more mid-sized than compact.

to enthusiast-level in terms of capabilities and performance for less than you'd pay elsewhere. Of course, these days Pentax is a brand under Ricoh's stewardship, but wisely Ricoh Imaging has stuck with the value-added formula.

Unlike the curvier K-S1, the K-S2 is more angular in its styling and while it's not overtly retro, it's very much a traditional D-SLR in the way it looks and its classical control layout. And it's more mid-sized than compact which means a largish handgrip and a pronounced pentaprism housing. The bodysell is glass-reinforced polycarbonate (GRP) with a stainless steel lens mount and full sealing – at 100 points – to prevent the intrusion of dust or moisture along with insulation to allow shooting in temperatures down to -10 degrees Celsius. According to Ricoh, the K-S2 is the world's smallest weatherised D-SLR and it's certainly one of the most affordable.

As the ranks of appealing mirrorless cameras steadily swell, the D-SLR makers are having to do a bit more to attract your attention. There's no question both Canon and Nikon are doing this very well at the top end of the market, but some of their lower-priced D-SLRs are... well, a bit ho-hum compared to a comparable

mirrorless model. However, this is where Pentax is at its strongest and, in fact, always has been since the legendary Spotmatic. And Pentax has also been doing its bit to keep the D-SLR in the spot light with its unmatched programs of create-your-own colour schemes (a huge hit in Japan) and, most recently, the light show and funky styling that made the entry-level K-S1 something a bit different.

It's a return to a more sober approach with the K-S2, but it continues the other Pentax strategy for keeping the D-SLR flag flying, namely to pump up the features without pumping up the price.

All the current Pentax D-SLRs represent great value for money, but it's the entry-level models where this makes the biggest difference... stepping them up

The optical viewfinder – still one of the main reasons for buying a D-SLR over a mirrorless camera – employs a proper glass pentaprism and gives 100 percent scene coverage. The focusing screen is interchangeable which is becoming more of a rarity even on the top-end models. A first on a Pentax D-SLR is the tilt/swing LCD monitor screen which has a tempered glass faceplate for increased resistance to scratching although, of course, the two-way hinge allows it to be folded away facing inwards for the ultimate protection when the camera is stored. The display itself is adjustable for brightness, colour saturation and colour balance.

The control layout centres around a large main mode dial with both front and rear input wheels – Pentax calls them ‘e-dials’ – plus a four-way navigational keypad. All the buttons are a good size and everything is clearly marked with an AF/MF switch on the lens mount binnacle along with a user-assignable multi-function ‘Fx’ button. There’s a dedicated button for video start/stop – with the movie mode selected via a setting on the power switch – and something called the ‘Self-portrait Shutter Button’ which is... ahem... designed for shooting selfies (aided by the rotatable monitor screen and live view).

As is the current fashion, the K-S2 has a built-in Wi-Fi transmitter – another first on a Pentax D-SLR

– with the convenience of NFC touch-and-go connectivity (the antenna is in the handgrip). The Pentax ‘Image Sync’ app enables remote camera control as well as wireless data transmission via both Android and iOS mobile devices.

SHIFTING FORTUNES

On the inside the K-S2 has a 20.4 megapixels (total) ‘APS-C’ format CMOS sensor with an imaging area of 15.6x23.5 mm and a sensitivity range equivalent to ISO 100 to 51,200. This appears to be the same device as is used in the K-S1 and, again, it goes with an optical low-pass filter (also called

an anti-aliasing filter) to optimise the resolution.

If moiré patterns are likely to be an issue with a subject, you can use the camera’s ‘Anti-Aliasing Filter Simulator’ which is derived from the sensor-based image stabilisation system and was introduced on the first K-3 model. In practice, the AA Filter Simulator works in the reverse to image stabilisation... in other words, the sensor is shifted fractionally in order to introduce the slight blurring or ‘filtering’ needed to counter moiré patterns. The system has three settings – ‘Off’ which is obviously for prioritising resolution;

‘Type 1’ which is designed to balance resolution and moiré correction by shifting the sensor in a linear direction; and ‘Type 2’ which oscillates the sensor in a circular motion in order to optimise the blurring effect and, as a result, the moiré correction. Additionally, there’s ‘AA Filter Simulator Bracketing’ which captures a frame with each method – and one without any correction – so you can decide which works best with a given subject.

As on the top-end Pentax D-SLRs, the sensor-shift stabilisation is also used to provide automatic levelling – or ‘Horizon



‘Green button’ is a Pentax tradition and provides auto resetting of exposure value. Incidentally, video start/stop is via the shutter release.

Video mode is engaged via the power on/off lever. There’s a separate button for activating live view for still photography.

Built-in stereo microphones are located either side of the pentaprism housing.

New ‘Advanced HDR’ function – accessed via the main mode dial – performs multi-shot HDR capture with ‘Clarity Enhancement’ processing.

Built-in Wi-Fi transmitter is a first for a Pentax D-SLR.

“ALL THE CURRENT PENTAX D-SLRs REPRESENT GREAT VALUE FOR MONEY, BUT IT’S THE ENTRY-LEVEL MODELS WHERE THIS MAKES THE BIGGEST DIFFERENCE...”

Correction' as Ricoh calls it – while its main job is to provide up to four stops of correction for camera shake. The K-S2's sensor is matched with Ricoh's latest generation 'PRIME M II' processor to enable continuous shooting at up to 5.5 fps, 1080/25p video recording and a range of on-the-fly image processing functions. As is the case across the Pentax D-SLR range, the S2 captures RAW files in either the Adobe DNG format or the proprietary PEF, and with a maximum image size of 5472x3648 pixels. JPEGs can be recorded in four sizes with a choice of three compression levels called Best, Better and Good. There's a single memory card slot for the SD format with support for the UHS-I speed SDHC and SDXC versions.

PICK A COLOUR

The processing functions for JPEGs start with a set of 'Custom Image' picture presets, 11 of them comprising Bright, Natural, Portrait, Landscape, Vibrant, Radiant, Muted, Bleach Bypass, Reversal Film, Monochrome and Cross Processing. The colour presets are mostly adjustable for saturation, hue, sharpness, contrast and high/low key, but with a couple of variations. This last parameter varies the image brightness over a range of plus/minus four steps. Adjustments to both the colour saturation and the hue are shown within a RGBCMY colour hexagon display which shows the variations in colour space terms.



The Bleach Bypass preset replaces the hue adjustment with a range of eight coloured toning effects (with green as the default) while the Reversal Film preset only has an adjustment for sharpness, but the colour saturation and contrast are already boosted to

replicate the look of transparency film. The Cross Processing mode has a Random setting, three preset effects and provisions for storing three favourite effects. The Monochrome 'Custom Image' has the adjustments for sharpness, contrast and high/low key plus

a set of contrast filters and a selection of toning affects. The choice of filters comprises yellow, orange, red, green, magenta, blue, cyan and infrared while the toning effects range from cold-to-warm (i.e. blue-to-sepia) over plus/minus four steps. The choice of in-camera special effects has been toned down compared to earlier Pentax D-SLRs so the K-S2 offers a choice of nine that can be applied at the point of capture and these comprise Extract Colour, Replace Colour, Toy Camera, Retro, High Contrast, Shading, Invert Colour, Unicolor Bold and Bold Monochrome... a bit of an eclectic collection if ever there was one. There's a bigger choice of effects available for application post-capture (i.e. a new, edited file is created), 20 in all plus something called 'Base Parameter Adjust' which provides fine-tuning of the image's brightness, saturation, hue, contrast and sharpness.

The K-S2 has a multi-shot HDR capture function with adjustable bracketing values from +/-1.0 to +/-3.0 or, alternatively, auto adjustment and three 'strength'



There's still the impression that shooting video isn't a key priority on Pentax D-SLRs, but the functionality is steadily improving and the K-S2 is as capable as its closest rivals from either Canon or Nikon.

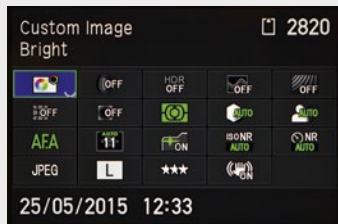
Clips are captured in the MOV format using MPEG-4 AVC/H.264 compression with a choice of 30, 25 or 24 fps recording speeds. The K-S2 has built-in stereo

microphones supplemented by a 3.5 mm stereo audio input and the sound levels can be adjusted manually. The program, aperture-priority auto, shutter-and-aperture priority and manual exposure control models are available. Time-lapse movies can be created in the Motion JPEG format and there's a nifty mode called 'Star Stream' which merges multiple frames to create the effect of moving stars when recording night skies. Nine of the special effects can be used when shooting movies including Toy Camera, Retro, Unicolor Bold and Bold Monochrome. Electronic image stabilisation is

available, but it's not nearly as effective as expected and can actually create an unpleasant rolling effect of its own. Moiré patterns can be an issue as, for obvious reasons, the 'AA Filter Simulator' isn't on the menu when shooting video. Nor is continuous autofocus, but manual focusing is assisted by both a magnified image and a focus peaking display. Stick with the basics and the K-S2 does a reasonable job as a video camera, but it's hard to see it being selected primarily for this role. The good news is that it's a much more accomplished still camera.



Menu displays have been revised with crisper graphics and a choice of 12 colour schemes.



'Control Panel' screen provides quick and easy access to a long list of capture-related functions and settings.

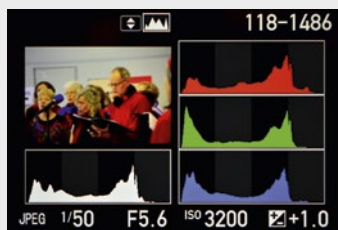


Image replay screens include a full set of histograms with a thumbnail (above), or a superimposed brightness histogram (below).



The live view screen can be configured to include an artificial 'horizon type' level display (above), grid guide and real-time histogram. A less intrusive bar-type dual-axis level display is also available.



settings called HDR1, HDR2 and HDR3. 'Auto Align' correction is available to ensure all three frames are perfectly aligned. A new 'Advanced HDR' setting is provided on the main mode dial and this also performs multi-shot capture, but with a very pronounced 'HDR look'... similar in appearance to the Impressive Art special effect on Panasonic's more recent Lumix mirrorless cameras.

Dynamic range expansion processing is available via the camera's 'D-Range' function which has separate adjustments for the highlights and the shadows, both with auto processing as the default. The 'Shadow Correction' has three manual settings, increasing in strength. New is an adjustment called 'Clarity Enhancement' which essentially works like Photoshop's Auto Levels tool to boost the contrast – by adjusting both the highlights and the shadows – to give a punchier looking image.

In-camera lens corrections are provided for distortion, vignetting, lateral chromatic aberrations and diffraction. There's also a multiple exposure facility which enables up to 2000 shots with the choice of Average, Additive or Bright exposure adjustments. You can also tick the box for an intervalometer which also allows up to 2000 frames to be recorded over intervals up to 24 hours. In the Interval Composite mode, the Average, Additive or Bright exposure adjustments are also available.

GET TO THE POINT

The K-S2's camera control systems are standard fare for this level of Pentax D-SLR, but we're still talking an 11-point AF system and 77-segment multi-zone metering. Nine of the AF system's points are cross-type arrays and there's the choice of five 'AF Active Area' modes for selecting the points – manual single point ('Select'), manual using a cluster of points ('Select Expanded Area'), spot or automatic using either just the five central focusing points or all 11. Automatic tracking is available, and the low light sensitivity extends down to -3.0 EV (at ISO 100). Beyond this, there's a built-in LED-type illuminator to light the way.

There's the option of manual or automatic switching between the

single-shot and continuous modes while, in the Custom Menu, it's possible to set the former to either focus-priority or release-priority and the latter to focus-priority, fps-priority or automatic determination of which is more important; focusing or the frame rate. Additionally, with continuous shooting you can also prioritise how the camera will deal with the first frame.

AF micro-adjustment is available (again accessed in the Custom Menu) and enables the autofocus to be fine-tuned to the particular focusing characteristics of up to individual 20 lenses.

Contrast-detection autofocus is used in live view with face detection and auto tracking modes while manual focusing here is assisted by a magnified view (up to 10x) and a focus peaking display.

Both centre-weighted average and spot metering methods are available as an alternative to the multi-zone measurements. The standard auto and semi-auto control modes are backed by an AE lock, up to +/-5.0 EV of compensation and auto bracketing for up to +/-3.0 EV (but shiftable over the compensation range). A total of 19 subject/scene modes

are available plus an 'Auto Picture' mode which automatically selects from nine of them based on the analysis of AF, metering and white balance data. The auto select modes include the main subjects such as portraits, landscapes, action and close-ups, but also Sunset, Blue Sky and Forest.

As usual for a Pentax D-SLR, the K-S2 has a couple of extra exposure controls to supplement the standard 'PASM' set. These are sensitivity-priority auto – marked as 'Sv' on the main mode dial – and shutter-and-aperture-priority auto – marked as 'TAv' on the mode dial. In the sensitivity-priority mode, the ISO setting can be changed on-the-fly via the rear input wheel and the aperture/speed combination is adjusted accordingly. The shutter-and-aperture priority mode does exactly the opposite, so the ISO setting is automatically changed in order to maintain the selected combination of aperture and shutter speed.

The K-S2 also retains the 'green button' for one-push resetting of exposure settings. This mostly works in conjunction with the program shift function. Manual control over the apertures or the shutter speeds is available by simply turning the back or front



img_2445.jpg@100%(RGB/8#)



Test images taken with the Pentax-DA 18-135mm f3.5-5.6 ED AL (IF) DC WR zoom lens which, like the K-S2 body, is also weather-proofed. Test JPEGs exhibit excellent detailing and definition, a good dynamic range (without additional processing), and rich but not overly saturated colours (using the default Bright 'Custom Image' preset). Noise levels are commendably low all the way up to ISO 3200.



100% Doc: 2.8mb

0 220 230 240 250 260 270 280 290 300



input wheels respectively, but full program control is resumed by pressing the green button. Alternatively, in the manual mode, pressing the green button instantly sets the aperture and shutter speed – as determined by the metering – which serve as the starting point for any subsequent adjustments.

The shutter speed range is 30-1/6000 second with flash sync up to 1/180 second. The K-S2's built-in flash has metric guide number of 12 (at ISO 100) and coverage equivalent to the 28mm focal length's angle-of-view (in the 35mm format). The modes include red-eye reduction, slow speed sync and second curtain sync. Flash compensation is available over a range of -2.0 to +1.0 EV plus there's a manual control mode which allows the output to be wound down to 1/128.

Although there's still no white balance bracketing function – a curious omission given just how loaded up with goodies the K-S2 is elsewhere – there are plenty of other control options including the Ricoh-designed 'Multi Auto White Balance' (first introduced on the CX-series compacts). This uses multi-point measurement to determine an average colour temperature in scenes where a number of different types of light source. The K-S2 also has the Pentax-designed 'Colour Temperature Enhancement' (CTE) mode which boosts the prevailing colour cast, and a 'warm' auto correction mode. This is buried in the Custom Menu as a setting called 'AWB in Tungsten Light' and there's the choice of switching between 'Strong Correction' and 'Subtle Correction', the latter maintaining more of the warmer tones. Nine white balance presets are provided (four for different types of fluorescent lighting),

along with one custom settings, manual colour temperature setting and fine-tuning in both the amber-to-blue and green-to-magenta colour ranges. Additionally, the white balance setting from an image can be copied and applied to subsequent captures.

INFORMATION CENTRE

The main monitor can be switched between a status screen (which includes the AF points) and a dual-axis 'artificial horizon' level display. There's also a control panel display which provides direct access to 19 functions and is navigated conventionally via the four-way key-pad (the K-S2 doesn't have touch controls). Subsequent adjustments are made via the rear input wheel. There's an extensive choice of 12 display colour schemes.

The menu design has been revised (as per the K-S1) so the layout is cleaner and crisper. Each chapter is divided into stand-alone pages which are individually accessed via numbered tabs (i.e. there is no continuous scrolling). Both the layout and navigation are fairly logical with repeated right-clicks progressively accessing the sub-menus and settings, and the 'Menu' key used to step back. What hasn't changed though is the ongoing idiosyncrasy that is Pentax's policy of also using either the left- or right-click keys to switch on (or off) some functions as well as the 'OK' button. Consequently, pressing 'OK' to confirm an action will actually switch that function off (or, indeed, on).

The live view screen can be configured to include a real-time histogram, a highlight warning (a rather dramatic flashing red), one of three grid patterns, dual bar-type electronic level displays and an exposure compensation scale. The 'artificial horizon' level display can also be superimposed over the live view image, but obviously takes up quite a bit of area in the middle of the frame.

A selection of five image review/playback screens are available, including one with a luminance histogram superimposed over the image (with the option of adding a highlight warning), a thumbnail with a full set of brightness and RGB histograms, or a smaller thumbnail accompanied by a comprehensive selection capture



**IMPROVEMENTS IN
HIGH ISO PERFORMANCE
ARE WHAT TEND TO
SEPARATE A NEW
MODEL FROM ITS
PREDECESSORS,
AND THE K-S2 IS
DEFINITELY SUPERIOR...**

info. While in the replay mode, pressing the navigator's down key brings up a menu of editing functions, superimposed over the image. These include the post-capture special effects, RAW-to-JPEG file processing, cropping, resizing and 'Colour Moiré Correction' which can be applied at one of three strengths.

Thumbnails pages are available with groups of six, 12, 20, 35 or 80 images, or there's a 'Calendar Filmstrip' display which provides access to all the images taken on a particular date. At the other end of the size scale, zoom playback allows for image magnification of up to 16x.

Copyright information can be added to the Exif data, with entries for the photographer's name and the copyright holder (each up to 32 characters in length). The slide show mode can actually be configured for variable display times (three, five, ten or 30 seconds) with a choice of three transition effects.

SPEED AND PERFORMANCE

With our reference Lexar Professional 600x 64 GB SDXC UHS-I memory card loaded, the K-S2 captured a burst of 28 JPEG/large/best images in 5.22 seconds. This represents a shooting speed of 5.36 fps which is only marginally shy of the quoted 5.5 fps. The average file size in this sequence was 12.0 MB. The 11-point phase-difference detection AF system is already well proven in earlier and existing Pentax D-SLRs. It's fast and accurate, despite the comparatively low number of points, but the contrast detection AF in both live and when shooting video is slow enough to make manual control the more desirable option. The 77-segment metering is also a good operator, and is more than capable of competently dealing with contrasty lighting situations.

The best quality JPEGs exhibit plenty of well-defined detailing, smooth tonal gradations and excellent colour fidelity. The Bright

'Custom Image' – which is the default – particularly balances saturation and accuracy beautifully, but obviously there's plenty of scope here for tweaking the way an image looks. Noise levels remain low up to ISO 3200 and still quite acceptable at ISO 6400. Definition increasingly diminishes at the highest sensitivity settings, but the colour saturation holds up very well so really all but the maximum setting of ISO 51,200 remain usable provided you don't mind a bit of graininess being evident in the areas of continuous tone.

Improvements in high ISO performance are what tend to separate a new model from its predecessors and the K-S2 is definitely superior in this regard to, say, the K-50 or even the K-5. Not surprisingly, given the new sensor, sharpness is much improved over the K-50.

THE VERDICT

As far as enthusiast-level features go, there's very little missing from

the K-S2 with probably white balance bracketing the only notable omission. OK, so a continuous shooting speed of 5.5 fps isn't going to make headlines these days, but it's fast enough for many users and everywhere else this camera punches above its weight. The feature list is truly extensive, further enhanced by the provision of a variable-angle LCD monitor screen and built-in Wi-Fi which, although it's a bit slow at present, will surely get better.

The K-S2 ticks so many boxes, it simply can't be ignored at its price point, both in terms of D-SLRs and mirrorless cameras. And it's certainly among the 'APS-C' sensor format's high achievers when it comes to image quality and, in particular, its high ISO performance.

But there is just so much scope for creative control as well as in the way JPEGs can be processed, this is a camera that will help you get wherever you want to go photographically. 📷

VITAL STATISTICS



PENTAX K-S2 \$925 body only

Type: Fully automatic digital SLR with Pentax K-AF bayonet lens mount.

Focusing: Automatic via 11-point wide-area system using phase-detection type CCD sensor arrays (nine cross-type arrays). Auto (11 or 5 point modes) and manual point selection. Manual or auto switching between one-shot and continuous modes, the latter with a predictive function. Sensitivity range is EV-3 - 18 (ISO 100/f1.4). AF assist provided by built-in illuminator. AF micro-adjustment for individual lenses (up to 20). Contrast-detection AF in live view and video modes. Manual focus assist in LV via magnified image and peak focus displays.

Metering: 77-zone evaluative, centre-weighted average, spot and TTL flash. Metering range is EV 0 to 22 (ISO 100/f1.4).

Exposure Modes: Program with shift, shutter-priority auto, aperture-priority auto, shutter-and-aperture priority auto, sensitivity-priority auto, metered manual, and P-TTL flash. Sensitivity priority program mode sets optimum aperture and speed for a given sensitivity setting. Nine subject programs with 'Auto Picture' mode which selects the most appropriate mode based on AF and AE data; plus 19 subject/scene modes.

Shutter: Electronic, vertical travel, metal blades, 30-1/6000 second plus 'B'. Flash sync to 1/180 second. Exposure compensation up to +/-5.0 EV in 1/3 or 1/2 stop increments.

Viewfinder: Coverage = approximately 100% vertical/horizontal. Magnification = 0.95x (50mm lens at infinity). LCD display and LED focus point indicators. Eyepiece strength adjustment built-in. Interchangeable focusing screens (choice of four).

Flash: Built-in pop-up unit with GN 12 power (ISO 100/m). External flash units connect via hotshoe. Flash compensation up to +1.0 EV and

-2.0 EV in 1/3 or 1/2 stop increments. Auto, red-eye reduction, fill-in, and first/second curtain sync modes. Manual control down to 1/128 of full power.

Additional Features: Bodyside sealed against the intrusion of dust and moisture, auto exposure bracketing (over three frames), depth-of-field preview, AE lock, dual-mode self-timer (two or 12 second delays), two users' settings memories, audible signals, remote shutter release, auto power-off (variable delay times), wired and wireless remote triggering, 28 custom functions. Compatible with Pentax SDM AF lenses.

DIGITAL SECTION

Sensor: 20.42 million pixels (total) CMOS with 15.6x23.5 mm imaging area. Sensitivity equivalent to ISO 100-51,200. No optical low-pass filter.

Focal Length Increase: 1.5x.

Formats/Resolution: Three JPEG compression settings and RAW output. RAW+JPEG capture. RAW images captured as DNG files. Four resolution settings; 5472x3648, 4224x2816, 3072x2048 and 1920x1280 pixels. 24-bit RGB colour for JPEGs, 36-bit RGB colour for RAW files (captured at 5472x3648 pixels resolution).

Video Recording: Full HD = 1920x1080 pixels at 24 or 25 fps (PAL) and 16:9 aspect ratio. HD = 1280x720 pixels at 50, 25 or 24 fps and 16:9 aspect ratio. MPEG 4 AVC/H.264 compression. Three quality levels. Up to 25 minutes duration. Built-in stereo microphones and 3.5 mm stereo audio input. Adjustable sound levels.

Recording Media: SD/SDHC/SDXC memory cards with UHS-I speed support.

Continuous Shooting: Up to 30 frames at 5.5 fps in JPEG/large/best mode, up to nine frames with RAW capture. Low speed continuous shooting at 3.0 fps.

White Balance: Auto/manual with nine presets, one custom setting and manual colour temperature fine-tuning along the amber-to-blue and/or magenta-to-green axes. 'Colour Temperature Enhancement' (CTE) mode enhances the prevailing lighting tone and 'Multi Auto' WB modes takes multiple measurements to better balance scenes containing a number of different light sources.

Interfaces: USB 2.0, micro HDMI (Type D), 3.5 mm stereo audio input.

Additional Digital Features: Body-integrated anti-shake via sensor shift, live view functions (with contrast-detection AF and face detection), built-in sensor cleaning, 'AA Filter Simulator' (Off, Type 1, Type 2), 'AA Filter Simulator' bracketing, 7.62 cm LCD monitor (921,600 pixels resolution) with tilt/swing adjustments, sRGB and Adobe RGB colour space, 11 'Custom Image' presets (Bright, Natural, Portrait, Landscape, Vibrant, Radiant, Muted, Bleach Bypass, Reversal Film, Monochrome and Cross Processing) with fine-tuning (for contrast, sharpness, colour saturation, colour tone and high/low key), B&W capture with filter and toning effects, nine at-capture special effects (Extract Colour, Replace Colour, Toy Camera, Retro, High Contrast, Shading, Invert Colour, Unicolor Bold and Bold Monochrome) with variable effects, 21 post-capture special effects (Extract Colour, Replace Colour, Toy Camera, Retro, High Contrast, Shading, Invert Colour, Unicolor Bold, Bold Monochrome, Tone Expansion, Sketch, Water Colour, Pastel, Posterisation, Miniature, Soft, Starburst, Fish-Eye, Slim, Monochrome, Base Parameter Adjustment) with variable effects, multi-shot HDR capture (HDR1, HDR2, HDR3, +/-1.0, +/-2.0, +/-3.0 EV with auto align), dynamic range expansion processing (highlight cor-

rection – On, Off, Auto; shadow correction – Off, Low, Medium, High, Auto), 'Clarity Enhancement' processing (Off/On), lens corrections (distortion, peripheral illumination, diffraction, and lateral chromatic aberration), 'Horizon Correction' (+/-1.0 degree with stabilisation active, +/-1.5 degrees without SR), multiple exposure facility (2 to 2000 with Average, Additive or Bright auto exposure adjustment), intervalometer (up to 2000 images, two seconds to 24 hours intervals with time delay), dual-axis electronic level display, real-time histogram in live view, histogram displays in replay (luminance and RGB), highlight/shadow alerts, long exposure noise reduction (Auto, On, Off), high ISO noise reduction (Auto, Custom, Low/Medium/High, Off), adjustable image display time, playback zoom (up to 16x), auto playback (with variable display times and transitions), 6/12/20/35/80 thumbnail displays, folder and calendar thumbnail displays, copyright information input, in-camera editing (rotation, colour moiré correction, resize, cropping, protect, 'Save as Manual WB', 'Save Cross Processing', movie edit, RAW-to-JPEG processing), built-in WiFi with NFC connectivity, PictBridge and DPOF support. May be fitted with optional O-GPS1 GPS receiver which generates compass display in the monitor screen.

Power: Rechargeable 7.4 volts, 1050 mAh lithium-ion battery pack (body only).

Dimensions (WxHxD): 122.5x91.0x72.5 mm

Weight: 618 grams (body only without battery pack or memory card).

Price: \$925 body only.

Distributor: C.R. Kennedy & Company Pty Ltd, telephone (03) 9823 1555 or visit www.pentax.com.au

FUJIFILM



— Ted's Price \$1399.95 —
\$1099.95

— After \$300 Cashback via redemption* —

*Via redemption from fujifilm.com.au

\$300
CASHBACK*

Fujifilm X-T10 Compact System Camera Kit with XF 18-55mm OIS Zoom

Fuji's new X-T10 is a mirrorless camera featuring Fuji's unique X-trans sensor, lightning fast autofocus abilities, and a high-res EVF viewfinder. The ultra fast EXR Processor II is capable of up to 8 fps full AF shooting and 1920x1080 Full HD video recording, and features an iso range from ISO 100-51200, allowing you to focus and shoot in the darkest conditions.

16

MEGA
PIXEL

8

FRAMES
PER SEC

3.0"

LCD
SCREEN



BUILT IN
WIFI

73

POINT
AF



FULL HD
MOVIE

ACT

Canberra Centre 125 Bunda St
 Canberra Civic 9 Petrie Plaza

Ph: 6249 7364
 Ph: 6247 8711

NSW

Sydney City 317 Pitt St

Ph: 9264 1687

VIC

Melbourne City 235 Elizabeth St
 Camberwell 843 Burke Rd
 Chadstone Shopping Centre
 Doncaster Shopping Centre
 Fountain Gate Shopping Centre
 Frankston 54-58 Wells St
 Greensborough Shopping Centre

Ph: 9602 3733
 Ph: 9861 9100
 Ph: 9568 7800
 Ph: 9848 3832
 Ph: 9705 4000
 Ph: 9783 8160
 Ph: 9434 3460

Highpoint Shopping Centre
 Knox City Shopping Centre
 Southland Shopping Centre

Ph: 9317 4477
 Ph: 9800 1677
 Ph: 9583 5433

SA

Adelaide City 212 Rundle St
 Marion Shopping Centre

Ph: 8223 3449
 Ph: 8179 4800

QLD

Brisbane City 150 Adelaide St
 Southport 36 Nerang St
 Maroochydore 50 Plaza Parade
 Garden City Westfield

Ph: 3221 9911
 Ph: 5591 8203
 Ph: 5479 2844
 Ph: 3849 2333

teds.com.au

integrated
shopping



IN-STORE



ONLINE



PHONE



MOBILE

All offers end 31st October 2015 or until sold out or otherwise stated. Not all stocks available all stores. Every effort is made to avoid errors in this publication, but Ted's does not warrant the accuracy of the content of this publication and may correct any errors and may refuse to sell any product or service. Any Liability of Ted's in respect of any part of this publication is negated to the extent permitted by law. And if liable Ted's obligation is limited to resupply of the goods or services, or repair, or payment for customers doing so, as Ted's chooses.

Ted's
cameras
 Helping you capture life



AUSTRALIAN TEENAGE PHOTOGRAPHER OF THE YEAR

ROUND 3 WINNER

Jackson Schorn

BROKEN HILL, NEW SOUTH WALES

THE WINNER OF the third round of the Australian Teenage Photographer Of The Year competition is 18-year-old Jackson Schorn who lives in Broken Hill in far western NSW. He describes himself as a "self-taught photographer" and is passionate about his home town and the surrounding outback.

"While I'll never be sure whether it is possible for a photographer to capture the heart of a location," he comments, "growing up and living in Broken Hill has definitely taught me that it is possible for a location to capture the heart of a photographer."

"I can, without a doubt, call this my favourite place for photography, where the simple act of seeing is enough to satisfy. For me, photography is about pursuing my passion of being behind the camera and creating artwork that I love and am proud of."

PROUDLY SUPPORTED BY

Canon



CALLING ALL YOUNG PHOTOGRAPHERS...

We're looking for the most talented teenage photographer in Australia so, if you're aged between 13 and 19, and think you've got what it takes to be published on these pages, then start putting your portfolio together.

The search for the Australian Teenage Photographer Of The Year is on! There are six chances to impress us with a great portfolio of pictures – and three of these are already gone – so don't miss this great opportunity to get into print (and on our Website) and possibly kick off a career in photography.

At the end of the competition, we'll judge all six portfolios and crown somebody the Australian Teenage Photographer Of The Year. Our good friends at Canon Australia have given us an EOS 750D D-SLR with an EF-S 18-135mm f3.5-5.6 IS STM zoom lens – currently valued at \$1449 – to present as the grand prize. Furthermore, the overall winner will be presented with the inaugural Australian Teenage Photographer Of The Year trophy.

For all the details about how to enter go to www.avhub.com.au and follow the 'WIN' link to this competition.



WIN!

**A Canon EOS 750D Super Kit
with EF-S 18-135mm f/3.5-5.6 IS
STM Lens valued at \$1449**



SIGMA

24mm f1.4 DG HSM ART

REPORT BY PAUL BURROWS



PERFORMANCE ART

It's a golden era for accessory lenses right now, and Sigma's high-performance Art Series for full sensor 35mm D-SLRs is contributing to the excitement.

Who'd have thought it? Not so long ago we were in the grip of zoom fever, but now prime lenses are back

in fashion... the faster the better and even, with quite a number of models, good old manual focusing. Of course, a lot of the current activity is being generated by the rise and rise of the mirrorless systems, but even with the D-SLR brands essentially whittled down to just three, there's still a lot happening here too.

Never one to sit still for very long, not surprisingly, Sigma is doing its bit in both categories, but it's the Art Series lenses for D-SLRs which are really on target right now. The line-up started with a classic 35mm prime, following by a standard 50mm and, more recently, a 24mm wide-angle. All have a maximum aperture of f1.4. Additionally, you can have the 24mm and 35mm focal lengths (and all points in between) in the first 'DG' Art Series zoom, but the main penalty is the loss of a stop of lens speed. Sigma's 'DG' designation indicates a lens primarily designed for use with full-35mm sensors while 'DC' indicates an 'APS-C' format model.

The rationale behind Sigma's Art lenses is not just a purity of purpose derived from the combination of focal length and maximum aperture, but also a purity of design which translates into superior optical performance. Consequently, the main competition – in terms of the independent lens makers – is coming from Zeiss which is charging rather a lot more for manual focus lenses versus the autofocus Art models, but Sigma is also holding its own against rival designs from both Canon and Nikon.

LOOK AND FEEL

The Sigma Art lens experience starts with the physical aspects of the design and construction. The styling is neither overtly classical nor contemporary, but rather elegantly understated with a matte black finish, a large and flush-fitting manual focusing collar and the small, discreet 'A' badge inset into one side of the barrel. At 665 grams, the 24mm model tested here has a nicely weighty 'heft' which suggests a solid construction, but the exterior also screams precision, particularly evident in the fineness of the tolerances where any two components meet. The focusing distance scale is inset, marked

in both meters and feet, and accompanied by a depth-of-field scale for f8.0 and f16. The focusing collar has a ribbed rubber grip, and the control itself is mechanical so it's properly weighted and allows for precise fine-tuning. The rear section of the main barrel is also ribbed. Interestingly, on the base of the barrel are engraved the numbers '015' which indicate the year this particular model was introduced.

The barrel construction is a mixture of alloys and a non-metal material employed as an alternative to GRP and which Sigma calls a 'Thermally Stable Composite' (TSC). It's designed to maintain those fine tolerances through a greater range of operating temperatures. That said, this lens isn't weather-proofed so it will need to be protected in other ways when being used in extreme conditions... although, as it happens, we used it in a blizzard when the wind-chill factor was pushing temps towards -10 degrees Celsius and it continued to operate flawlessly throughout.

Sigma builds the 24mm f1.4 Art with mounts for Canon, Nikon and its own bayonet fitting, with Sony's A mount to become available shortly (although this lens is a prime candidate for the FE mount). The mounts themselves are milled from solid lumps of brass for enhanced durability.

ELEMENTARY

The all-glass optical construction comprises 15 elements in 11 groups and it's here that Sigma weaves its magic as nine of these elements are special types in one way or another. Three are made from Sigma's '"F" Low Dispersion' glass which has been formulated to give a refractive index and dispersion characteristics similar to those of fluorite-type elements.

To this day, fluorite crystal elements are hugely expensive to make but extremely effective at minimising chromatic aberrations so a number of lens makers have worked on finding suitable alternatives. Sigma says its FLD elements have anomalous dispersion characteristics "very similar to those of fluorite" and so are able to correct for residual chromatic aberrations, working in conjunction with the 24mm's four 'Special Low Dispersion' (SLD) types.

Also in the mix are two aspherical elements which correct for distortion, but by placing one of these elements at the very rear of the lens, it also provides some

correction for sagittal coma flare (a smearing or streaking of point light sources that's particularly problematic with wider angle lenses because of the more acute angle-of-incidence at which the light rays are refracted towards the edges of the frame).

The 24mm also has Sigma's 'Super Multi-Layer Coating' to minimise ghosting and flare, and it has a nine-bladed diaphragm to give more rounded out-of-focus effects. Autofocusing is via Sigma's 'Hyper Sonic Motor' (HSM) ultrasonic drive, but a full-time manual override is provided for any subsequent fine-tuning. The focusing group is internal so the barrel length remains unchanged and the front element – which accepts 77 mm diameter screwthread filters – doesn't rotate. The minimum focusing distance is 25 centimetres, allowing considerable scope for shooting close-ups combined with the 24mm's interesting perspective and the highly selective focus inherent with the very shallow depth-of-field at f1.4. In practice, this combination of focal length

and maximum aperture creates a surprisingly versatile lens with the obvious applications being landscapes, city scapes, street photography, environmental subjects and even some sports where you can get close to the action.

Thanks to the degree of correction provided by its optical design, to this list can be added architecture, interiors and astrophotography.

PERFORMANCE

We tested Sigma's 24mm f1.4 Art lens on a Canon EOS 6D body and then, because it was conveniently also being tested at the time, the EOS 5Ds. In theory at least, there's no reason why this lens shouldn't be up to the challenge of 50 MP resolution (especially as Sigma's 'A1 MTF' measuring system uses a 46 MP Foveon direct RGB image sensor).

Sharpness is obviously the key here and there's no question this lens is exceptionally sharp, even at f1.4 although here there's some fall-off towards the corners. This steadily improves at f2.0 and f2.8,

Focusing distance scale is marked in both feet and metres, and has depth-of-field indicators for f8.0 and f16.



AF/MF switch shows white when set to autofocus, black when switched to manual mode. Full-time AF override is available.

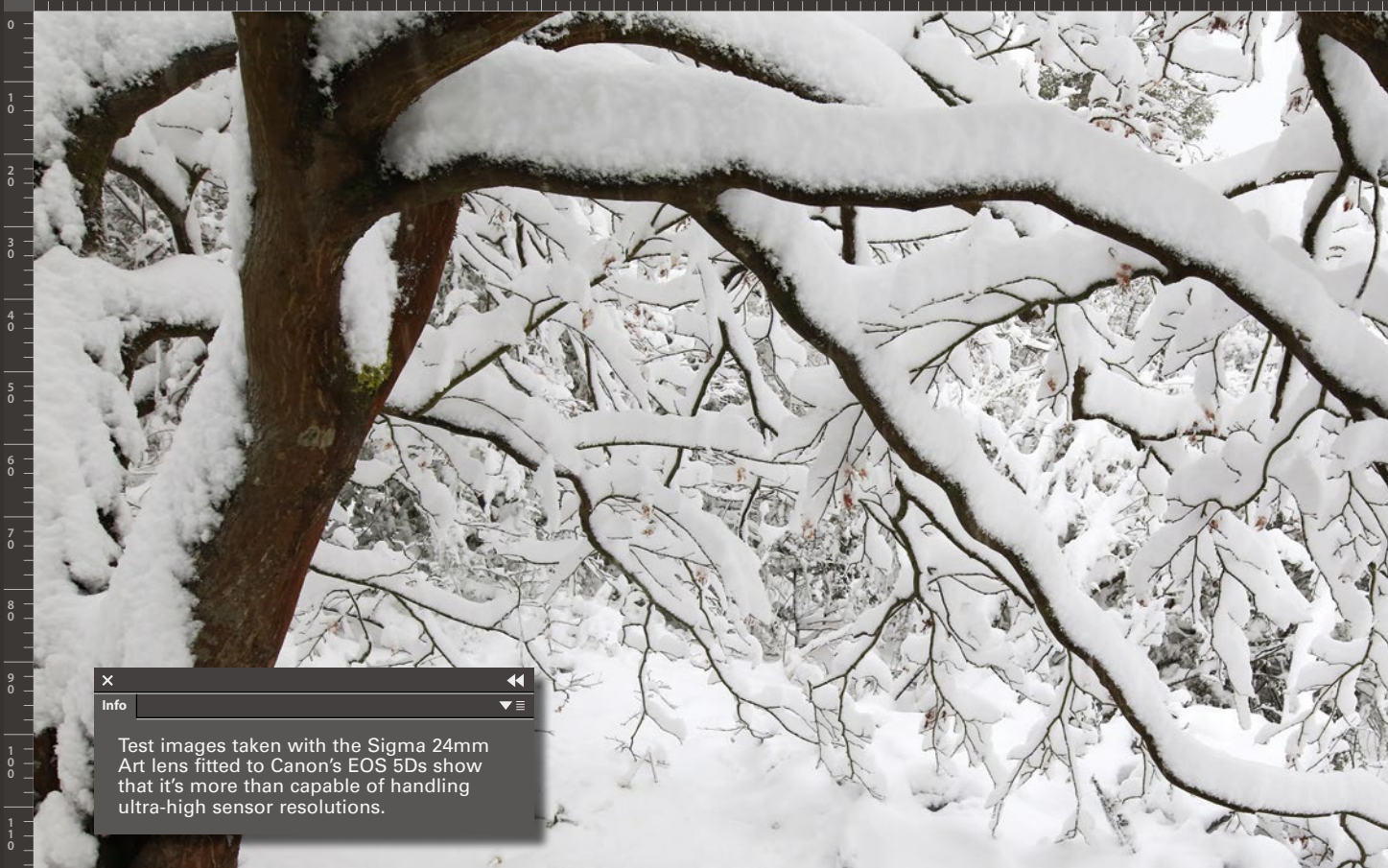
THE SIGMA ART LENS EXPERIENCE STARTS WITH THE PHYSICAL ASPECTS OF DESIGN AND CONSTRUCTION. THE STYLING IS NEITHER OVERTLY CLASSICAL NOR CONTEMPORARY, BUT RATHER ELEGANTLY UNDERSTATED.

SIGMA 24MM F1.4 DG

ON TRIAL

X img_2445.jpg@100%(RGB/8#)

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210



X
Info
Test images taken with the Sigma 24mm Art lens fitted to Canon's EOS 5Ds show that it's more than capable of handling ultra-high sensor resolutions.



X
Info
The 24mm Art lens's imaging performance is exceptional, including excellent centre-to-corner sharpness at apertures from f2.0 to f11. It's highly corrected for both distortion and chromatic aberrations. The images of derelict cars (for the record, a pair of Triumph Mayflowers) captured with a Canon EOS 6D at ISO 400. Snow scenes captured with the EOS 6D at ISO 200, 400 or 640.

100% Doc: 2.8mb

0 220 230 240 250 260 270 280 290 300



leading to remarkable centre-to-corner uniformity from f4.0 to f11 (at f16 diffraction starts to become an issue). Likewise vignetting – a.k.a. brightness fall-off – which is quite pronounced at f1.4, but completely gone by f4.0.

Particularly commendable is the correction for distortion which succeeds in almost completely eliminating any barrel-type bending. Only when a straight edge is located immediately adjacent to a frame edge is the slightest curvature evident. Lateral chromatic aberration is also well handled to the extent that it's unlikely to be an issue in 99 percent of situations. Flare and ghosting are both effectively suppressed even when the sun is included in the top of the frame, and while some flare can become evident when shooting at the smallest apertures it's tightly controlled and doesn't unduly compromise contrast or saturation.

As noted earlier, the reasonably short minimum focusing distance opens up more creative options with this lens, especially in terms of exploiting the narrow depth-of-field wide open and the beautifully clean out-of-focus effects. These allow for selective focus to be fully exploited as a creative tool, but the 24mm's angle-of-view complimented by the high level of correction for distortion also offers plenty of artistic possibilities using framing, composition and focus.

Obviously Canon's rival L Series EF 24mm f1.4 II USM is included on the EOS 5Ds's dance card of recommended lenses, but what about Sigma's 24mm Art model? Following Canon's recommendation of testing its 50 MP D-SLR mounted on a tripod – and using its mirror lock-up-with-delayed-auto-release feature to ensure a completely even playing field in terms of eliminating any movement-related sources of possible softness – the Sigma lens performed impressively well, resolving the very fine detailing with commendable definition and crispness. Optimum sharpness is delivered between f2.0 and f8.0. The smoothness of the tonal gradations and the contrast characteristics are on a par with those of the various L Series primes we used on the EOS 5Ds. The bottom line here is, indeed,

the bottom line as the Sigma 24mm Art has the advantage of being significantly more affordable, especially compared to its direct rivals from either Canon or Nikon.

THE VERDICT

This is a lens to fall in love with. Aside from the brilliant performance, it handles beautifully on any mid-sized or pro-level D-SLR, the proportions and weight making for a very well-balanced combination (especially on the former). It's also very comfortable to handle and, while it would be nice if the focusing collar offered a little more rotational travel, it certainly allows for fast manual operations. The real highlights in terms of the optical performance are the high degree of correction for both distortion and chromatic aberrations, but the overall sharpness (even at full aperture), contrast and attractive out-of-focus characteristics all add up to a fast wide-angle prime that's technically one of the best on the market. Throw in the considerable creative potential, a surprising degree of versatility and the wallet-friendly price tag, and Sigma's 24mm f1.4 Art becomes a strong alternative to the camera makers' own best offerings. 📍

VITAL STATISTICS

SIGMA
24mm f1.4 DG
HSM ART
\$1049

Format: For full-35mm format or 'APS-C' size sensor D-SLRs. Focal length on the latter is equivalent to 36mm (with a magnification factor of 1.5x).

Angle-of-View: 84.1 degrees (diagonal).

Construction: 15 elements/11 groups.

Minimum Focus: 25 cm.

Maximum Reproduction Ratio: 1:5.3.

Aperture Range: f1.4 – f16.

Overall Length: 90.2 mm.

Maximum Diameter: 85.0 mm.

Filter Diameter: 77 mm.

Weight: 665 grams.

Lens Mount(s): Canon EF, Nikon F (D-type AF), Sony A and Sigma S-AF.

Features: Two aspherical elements, three 'FLD' ('F' Low Dispersion) glass elements, four 'SLD' (Super Low Dispersion) glass elements, internal focusing, nine-blade diaphragm, ultrasonic AF drive, full-time manual focus override. Lens hood and carry pouch supplied. Compatible with Sigma's USB Dock for firmware upgrades.

Price: \$1049.

Distributor: C.R. Kennedy & Company Pty Ltd, telephone (03) 9823 1555 or visit <https://sigmaphoto.com.au>

OLYMPUS OM-D AT WORK

Rachel Devine, Melbourne

Born in the USA, professional photographer Rachel Devine specialises in photographing children and has shot advertising, fashion, editorial and even celebrities. She also presents a hugely popular photography blog (visit sesameellis.com) and conducts workshops to teach parents how to photograph *with* their kids instead of just taking pictures *of* their kids.

Rachel Devine has combined her loves of children – she has three of her own – and photography to create a distinctive, naturally charming style of imaging that resonates with viewers. Beyond her own photography, Rachel is committed to helping parents share the legacy of photography with their children by putting the kids behind the cameras. Her passion is to help people learn how to record the beauty in their lives and see the extraordinary in the ordinary.

Rachel's interest in photography started when she was a teenager and, after leaving university, she opened a photography business in Los Angeles on, she says, "a wish and lots of hard work." For the next decade or so, she photographed child models and actors for the top agencies, magazines and clothing companies before moving both her family and business to Melbourne in 2008.

Asked about her passions in photography, Rachel says, "I think I can narrow it down to two things, life and light. I love photographing people – especially children – but anything in beautiful light is worthy of a photo. The joy of photography for me is celebrating the beauty of regular life well-lit."

Among her photographic influences she lists Mary Ellen Mark and Sally Mann.

"It is my greatest regret that I did not get to attend a workshop taught by Mary Ellen Mark before she passed away. I think that photographing my everyday life is the key to making my professional photography shine. I never feel nervous before a big shoot, nor do I worry

about inspiration because I am constantly workshopping my ideas and practising skills while making amazing photographs of the mundane. I look to my photographic heroes like those I mentioned as well as Tina Barney, Nan Goldin, Kieth Crter and Michael Kenna to hopefully absorb some small mote of their inspirational dust."

Rachel started using the Olympus OM-D system in the middle of 2014 and says she hasn't picked up another camera since.

"I fell in love immediately with the quality of the imagery and how natural the camera felt in my hands. I did not need to fumble around the controls at all and can swap settings without even taking my eye from the viewfinder. The game changer for me was certainly the camera's built in WiFi system that pairs with the Olympus Image Share app, as I no longer have to lug my laptop around with me to work on my photographs. I simply engage the WiFi and transfer

"The joy of photography for me is celebrating the beauty of regular life well-lit."

images to my phone or tablet and then edit and share!"

She lists the portability of the compact OM-D camera bodies and M.Zuiko Digital lenses as the key benefit as far as her photography is concerned.

"This is a bonus personally, as I always have my camera with me either around my neck or in my bag. The 'real' camera does not get left at home anymore. Professionally, I photograph children for advertising, editorial and fashion

campaigns. Some of my models are very little and the size of the camera makes it easy for me to get down on the floor and interact with them to elicit the best expressions and angles. The camera is not intimidating either.

"Generally, I find using the viewfinder easier to use while shooting than the LCD. As it is an electronic viewfinder in the mirrorless system, I can see the exposure and colour changes I am making in real time there. That has been an amazing benefit for me and one I can't imagine going without now.

"Finally, I am excited about the mirrorless camera system as I will be able to use a wide variety of my old lenses on the new cameras. I have yet to experiment with this, but it is on the list of things to do. I can't wait to see what I can create with the OM-D system and my collection of vintage glass."

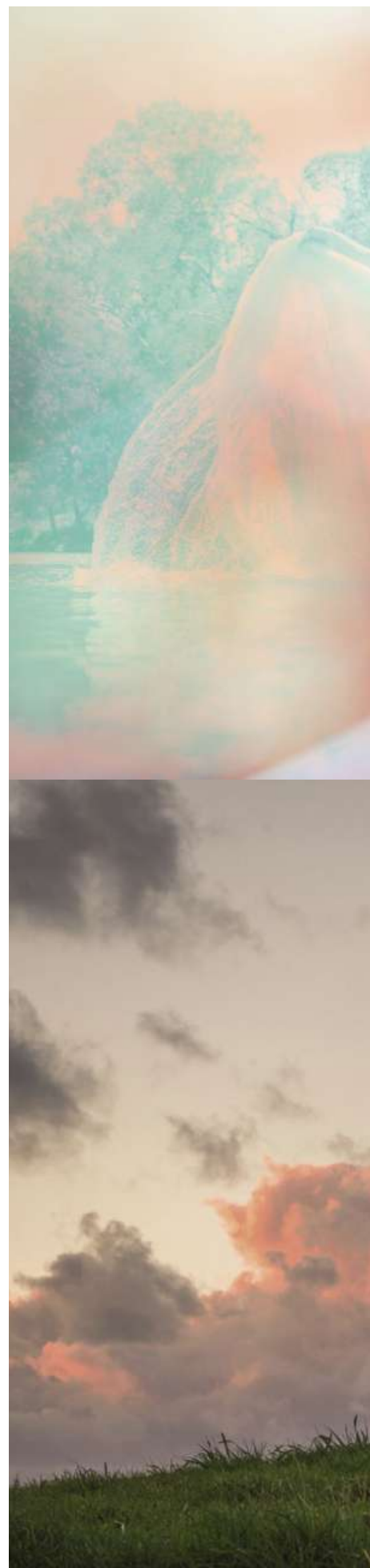
However, Rachel says her favourite lens is the M.Zuiko Digital 12-40mm f2.8 PRO because

"...the quality is amazing across all focal lengths even wide open".

So far, Rachel has published a number of books – *Beyond*

Snapshots from Crown Publishing House (Random House/Amphoto/Ten Speed Press) and two e-books titled *Click!* and *Life In Natural Light* (for Digital Photography School). She is currently working on a new edition of "my program to help parents teach their own kids how to take pictures. I absolutely thrive on sharing the love of photography with everyone," she says.

To see more of Rachel's work visit www.racheldevine.com





OLYMPUS M.ZUIKO DIGITAL PRO SUPERWIDES VOIGTLÄNDER NOKTON 10.5MM F0.95



WIDE AND WONDERFUL

Micro Four Thirds mirrorless users have never had it so good as far as lens choices are concerned, and if wide-angles are your thing, there's a trio of brilliant new arrivals.

REPORT BY
PAUL BURROWS



f all the 'start up' lens mounts that have accompanied the mirrorless revolution, Micro Four

Thirds has undoubtedly been the most successful. Beyond the combined might of its two chief protagonists, Olympus and Panasonic, it's been embraced by leading independents Sigma and Tamron, plus there's an interesting little collection of less mainstream brands on board such as Voigtlander, Samyang and Kowa. There's even a very interesting 300mm f6.3 mirror telephoto from Tokina (equivalent to 600mm when you mount it on an MFT camera body).

However, it's wide-angles that are more of a challenge with the smaller sensor size, but here there's plenty of good news too with Olympus launching two ultra-wides in its PRO series of higher-end M.Zuiko Digital lens and Cosina's Voigtlander-badged superfast 10.5mm f0.95 arriving after being announced towards the end of 2014. The 10.5mm – which has an effective focal length of 21mm – is the fourth f0.95 speed Voigtlander lens for the MFT mount, joining the existing 17.5mm (35mm effective), 20mm (40mm) and 42.5mm (85mm). The wafer-thin depth-of-field at f0.95 is finding favour with both photographers and video makers alike.

Olympus's PRO MFT lenses are at the very top of the M.Zuiko Digital range and indicative of the inexorable advance of mirrorless camera systems into the traditionally D-SLR territories of enthusiast-level and professional users. Olympus – and Fujifilm – have both introduced pro-level mirrorless camera bodies designed to replace the D-SLR and the same is true of the Lumix GH4, although Panasonic had only a very brief flirtation with the D-SLR in the mid-2000s (remember the L1 anybody?).

The M.Zuiko Digital ED 8mm f1.8 PRO – which has an effective focal length of 16mm – is the world's fastest production fish-eye lens (i.e. more than a handful are being built) and it's only been made possible by some of the latest

developments in optical design and manufacturing. Consequently, it's packed with a veritable smorgasbord of special elements designed to deal with the many aberrations which would otherwise plague such a combination of angle-of-view and lens speed. It's a testimony to the sophistication of the 8mm's design that Olympus is happily recommending it for astrophotography, promising the pinpoints of stars will be rendered as pure pinpoints... even at the peripheries of the frame. This means incredibly high levels of correction for both coma and chromatic aberrations.

The M.Zuiko Digital ED 7-14mm f2.8 PRO is another feat of optical engineering with no fewer than ten of its 14 elements being special designs in one way or another. Again Olympus hasn't been afraid of taking up the challenges associated with combining ultra-wide angles-of-view with a constant maximum aperture of f2.8, while still delivering high levels of correction for a range of aberrations in order to optimise image quality. And just for good measure, both these PRO series ultra-wides have weather-proofed barrels which includes insulation, enabling operation in temperatures down to -10 degrees Celsius.

OLYMPUS'S PRO MFT LENSES ARE AT THE VERY TOP OF THE M.ZUIKO DIGITAL RANGE AND INDICATIVE OF THE INEXORABLE ADVANCE OF MIRRORLESS CAMERA SYSTEMS INTO THE TRADITIONAL D-SLR TERRITORIES OF ENTHUSIAST-LEVEL AND PROFESSIONAL USERS.



OLYMPUS M.ZUIKO DIGITAL ED 8mm f1.8 PRO

VITAL STATISTICS

Mount: Micro Four Thirds.
Effective Focal Length: 16mm.
Angle-of-View: 180 degrees (diagonal).
Construction: 17 elements/15 groups. One aspherical type, Three 'Super ED' types, two ED types, one 'Super HR' type and two 'HR' types.
Minimum Focus: 12 cm.
Maximum Reproduction Ratio: 1:5.0
Aperture Range: f1.8 – f22.
Overall Length: 88.0 mm.

Maximum Diameter: 62.0 mm.
Filter Diameter: N/A.
Weight: 315 grams.
Features: Fully weather-protected construction (dust, moisture and subzero temperatures), seven-bladed diaphragm, Olympus 'ZERO' multi-coating, built-in 'petal' lens hood.
Price: \$1399
Distributor: Olympus Imaging Australia, telephone 1300 659 678, or visit the website at www.olympus.com.au

The first impression of Olympus's 8mm fisheye is just how compact it is compared to any similar lens for either the 'APS-C' or full-35mm sensor formats. Usually there's a huge expanse of curved and highly exposed front element to worry about with a fisheye, and while the Olympus lens still presents a lot of glass at the front, it doesn't look nearly so vulnerable. A petal-

shaped hood is built in (a big lens cap fits over it) and provides some degree of protection against the unthinkable, but obviously there is no way of fitting a filter.

Six circular seals at various points along the barrel guard against the intrusion of dust or moisture, but as there's only a manual focusing collar, the barrel has pretty high degree of inherent integrity. The 16mm-equivalent focal gives this lens an exceptionally wide depth-of-field

so focusing may not even be needed on occasions. According to Olympus's figures when this lens is set to an aperture of f22 and a focusing distance of 30 centimetres, the zone of sharpness extends from 176 centimetres to infinity. However, as there's no distance scale provided, you're probably just going to

With a full 180-degree angle-of-view the Olympus M.Zuiko ED 8mm f1.8 lens can be used to create a variety of perspectives.



leave things to the autofocusing anyway. The manual control is 'fly-by-wire' and feels a little disconnected, especially as the minimum focusing distance is just 2.5 centimetres so there's a fair amount of twiddling to be done to cover the full range. Also, it rotates continuously with no stops so it's hard to know when you've come to the end of this very wide focusing range. On the plus side, the close focusing capabilities mean you can have some fun with macro photography, experimenting with both the exaggerated perspective and the shallower depth-of-field available at f1.8.

The optical construction comprises 17 elements arranged in 15 groups and these include – wait for it – three Super Extra-Low Dispersion types, two Extra-Low Dispersion types, one aspherical element, one Super High Refractive type and two High Refractive types. The low dispersion glass helps minimise chromatic aberrations while the glass with a high refractive index allows for thinner elements while improving contrast and also providing more effective correction for spherical aberrations. Ironically, comatic aberration – where off-axis point sources become

progressively comet-shaped towards the periphery of an image – is a phenomenon of lenses conventionally corrected for spherical aberrations, so it's a case of devising a combination of plano-convex and plano-concave elements – called an *aplanat* – to minimise both. An aspherical element can also be 'tuned' to do the same job. If, about now, you're getting the idea that Olympus's optical engineers took on quite a challenge with this lens, you're spot on.

The angle-of-view is a full 180 degrees so extreme barrel distortion is the predominant visual characteristic and it can be put to good effect with a great many subjects. Surprisingly, there's very little vignetting, even at f1.8, and the overall sharpness is excellent. Out-of-focus corners – most noticeable at the widest apertures – are actually related to depth-of-field rather than the lens's design and closing down a few stops ensures these areas are more sharply rendered. We used the 8mm fisheye on an Olympus OM-D E-M10 and a Panasonic Lumix G7 and with both the autofocus was fast and reliable so you may only need to resort to manual control if you're trying to manipulate the depth-of-field and so want to focus on a specific point. Some lateral chromatic aberration is noticeable at the edges of the frame when an image is magnified, but it's also pretty effectively corrected by the in-camera processing provided on all the Olympus OM-D bodies except the original E-M5.

The distinctive visual characteristics of a fisheye lens have tended to make it more of a specialised tool, but the advanced optical design of the M.Zuiko Digital 8mm means there's the potential for it to be used in a number of areas other than just playing around with the distortion effects. Just as well, because, comparatively speaking, this isn't a cheap lens, but the discernibly superior image quality – specifically the high levels of correction for all the usual fisheye deficiencies – and the all-weather capabilities take it well beyond being a mere plaything.



THE DISTINCTIVE VISUAL CHARACTERISTICS OF A FISHEYE LENS HAVE TENDED TO MAKE IT MORE OF A SPECIALISED TOOL, BUT THE ADVANCED OPTICAL DESIGN OF THE M.ZUIKO DIGITAL 8MM MEANS THERE'S THE POTENTIAL FOR IT TO BE USED IN A NUMBER OF AREAS.



OLYMPUS M.ZUIKO DIGITAL ED 7-14mm f2.8 PRO

VITAL STATISTICS

Format: Micro Four Thirds.
Effective Focal Length: 14-28mm.
Angle-of-View: 114 to 75 degrees (diagonal).
Construction: 14 elements/11 groups. Two aspherical ED types, one 'Dual Super Aspheric' type, one aspherical type, three 'Super ED' types, one ED type, and two 'HR' types.
Minimum Focus: 20 cm.
Maximum Reproduction Ratio: 1:8.3.
Aperture Range: f2.8 – f22.
Overall Length: 105.8 mm.
Maximum Diameter: 78.9 mm.

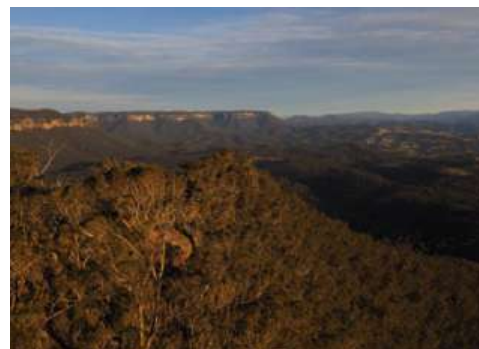
Filter Diameter: N/A.
Weight: 534 grams.
Features: Fully weather-protected construction (dust, moisture and subzero temperatures), seven-bladed diaphragm, Olympus 'ZERO' multi-coating, 'MF Clutch' for fast AF/MF switching, customisable 'L-Fn' button (via OM-D and Digital PEN bodies), built-in 'petal' lens hood.
Price: \$51699.
Distributor: Olympus Imaging Australia, telephone 1300 659 678, or visit www.olympus.com.au

An equally big challenge in optical engineering terms, Olympus's ultra-wide zoom – the effective focal range is 14-28mm – is arguably the more practical lens, especially for applications such as landscape photography.

The maximum angle-of-view is still an expansive 114 degrees, but the rectilinear design means there's a much higher level of correction for distortion thanks to the incorporation of some fairly complex aspherical elements; four in all, including one 'Dual Super Aspheric'. The weather protection

extends to 11 weather seals because this lens obviously has a zooming collar, but it also has what Olympus calls an 'MF Clutch' so the focusing ring can be pushed and pulled to switch between autofocus and manual control. It's a neat little arrangement that allows for very rapid switching between AF and MF operations, and the latter provides a distance scale. While it's still a 'fly-by-wire' electronic control, it has more feel than the fisheye's and, usefully, there are hard stops at either end of the focusing range.

The 7-14mm zoom also has the 'L-Fn' button which can be



OVERALL, THE M.ZUIKO DIGITAL 7-14MM F2.8 IS A STRONG PERFORMER FOR AN ULTRA-WIDE ZOOM WITH A COMPARATIVELY LARGE MAXIMUM APERTURE.

assigned a particular function via the camera's Custom Menu (a feature that's not supported by the Panasonic bodies). This is also quite handy as the 'L.Fn' button is located close to the zooming collar so, if you assign a regularly-used function such as exposure compensation, it means you don't have to continually change your grip.

The constant maximum aperture of f2.8 is fast for this type of lens and it's one of the

extra capabilities that contributes to its premium pricing compared to, say, Panasonic's Lumix G Vario 7-14mm f4.0 ASPH. Again, a petal-shaped lens hood is built-in and an extra-large lens cap slips over it. Obviously then, you can't fit filters upfront, but there isn't a rear holder either. We tried rigging up an arrangement with Z Series Cokin's, but reflections off the back of the filter were an issue so a more tailored solution is probably required.

The effort Olympus has put into the design of this lens is evident in its performance capabilities. At 7mm and f2.8 there's some fall-off in sharpness towards the corners of the frame, but it's not nearly as pronounced as you might expect and won't be a concern in many situations. Stop down to f5.6 and the centre-to-corner uniformity of sharpness is quite impressive as is the case at the 'longer' focal lengths beyond 10mm. Diffraction results in a small reduction in sharpness at the smallest apertures (an issue with any MFT lens), but the latest Lumix G bodies, such as the G7, have 'Diffraction Correction' processing for JPEGs. Vignetting is surprisingly small at 7mm and progressively disappears towards 14mm, but again both the Olympus and Panasonic MFT bodies have switchable shading compensation processing if you want to completely eliminate any

brightness fall-off. The level of correction for curvilinear distortion is impressive and, of course, this is partially down to the in-camera correction performed by the OM-D bodies, but even without it, the amount of barrel-type distortion is still reasonably small at 7mm and non-existent at 14mm.

Flare and ghosting – potentially problematic with such wide angles-of-view – is well suppressed by Olympus's 'ZERO' (Zuiko Extra-Low Optical) multi-coating which is applied to all element surfaces.

Overall then, the M.Zuiko Digital 7-14mm f2.8 is a strong performer for an ultra-wide zoom with a comparatively large maximum aperture. The main deficiency is the soft corners which are most

Excellent control of distortions while providing superb sharpness, contrast and colour rendition make the M.Zuiko 7-14mm f2.8 zoom "somewhat of a triumph".

noticeable at 7mm and f2.8, but again it's all relative and we've seen many wide-angle zooms do much worse in this regard. The sharpness, contrast and colour rendition – along with the correction of distortion, chromatic aberrations and vignetting with OM-D bodies – make this lens something of a triumph. It complements the existing line-up of PRO series optics very nicely, giving Olympus's OM-D mirrorless system even more appeal as an alternative to a D-SLR.





VOIGTLÄNDER NOKTON 10.5mm f0.95 ASPHERICAL

STATISTICS

Format: Micro Four Thirds.
Effective Focal Length: 21mm.
Angle-of-View: 93 degrees (diagonal).
Construction: 13 elements/10 groups. Two aspherical types (three surfaces) and one 'Super High Refractive' type.
Minimum Focus: 17 cm.
Maximum Reproduction Ratio: 1:8.2.
Aperture Range: f0.95 – f16.
Overall Length: 82.4 mm.
Maximum Diameter: 77.0 mm.

Filter Diameter: 72 mm.
Weight: 585 grams.
Features: All-metal barrel construction, switchable aperture collar (click-stopped or continuous adjustment), ten-bladed diaphragm, depth-of-field scale. Metal 'petal' lens hood supplied.
Price: \$1395.
Distributor: Mainline Photographics, telephone (02) 9437 5800, or visit www.mainlinephoto.com.au

And now for something completely different. While both the Olympus lenses have mostly metal barrels, neither exude quite the same bullet-proof solidity as the Voigtlander 10.5mm... as evidenced by the fact that it manages to weigh 50 grams more than even the comparatively beefy 7-14mm zoom.

On the outside, the Voigtlander is very much old school – all metal control rings including the focusing collar (which, by the way, is mechanical), engraved markings and a proper depth-of-field scale. The aperture collar has seriously

meaty click-stops and the supplied metal lens hood is fixed via a locking screw. And the mount is just a bayonet fitting, not even an aperture pin in sight. Welcome to 1958. Except, of course, the 10.5mm f0.95 is a brand new lens and its optical construction includes a couple of modern-era aspherical elements. Even more 21st century is the 'Selective Aperture Control System' which switches the aperture collar from click-stopped operation to stepless adjustment for shooting video. Importantly, this adjustment is completely silent.

The 'passive' lens mount means a couple of set up preliminaries. With Panasonic Lumix G camera bodies it's necessary to select 'Shoot Without Lens' in the Custom Menu. You'll also need to switch the 'MF Assist' functions – specifically image magnification – so they can be activated from the camera body rather than when the manual focus collar is turned (which obviously can't be detected by the camera). If switched on, you'll get the focus peaking display at any time, but it's much easier to see with the magnified image whether the subject is focused especially with the extremely shallow depth-of-field at f0.95. Additionally, the nicely-weighted focusing collar has a very long throw, providing for very precise fine-tuning, especially at the close focusing distance, making these modern manual focusing aids even more essential. It's worth noting that this lens

focuses beyond infinity so it can still be focused in hotter conditions when all those metal components will expand slightly.

Exposure control has to be either via the aperture-priority auto mode or fully manual, but with only stopped-down metering. The plus/minus exposure scale is probably the most reliable guide, particularly if you want full live view image brightness to assist with focusing and composition. Alternatively, switch the live view image to reflect the exposure settings (Panasonic, for example, calls this 'Expo. Meter' and it's set in the camera's Custom Menu) and it will then brighten or darken as you change apertures and/

or shutter speeds. Here the live view histogram can also be of assistance. We tested the Nokton 10.5mm f0.95 on the Lumix G7 and found the 'Expo.Meter' screen to be a fairly accurate indication of exposure so deliberately applying under- or overexposure for creative effect was much easier to gauge. It's worth noting that, with Olympus cameras, there's the benefits of sensor-based image stabilisation which further extends this lens's low light capabilities.

Cosina makes these f0.95 speed lenses for MFT cameras to make up for the smaller sensor's inherently greater depth-of-field and allow for more selective focusing for creative purposes. No doubt this is also why there's a ten-bladed diaphragm so it gives smoother out-of-focus effects... which are an important element of the image when the depth-of-field is so shallow. Even with all the G7's live view assists running, the 10.5mm is still pretty tricky to focus accurately especially at the wider apertures and you really do need the focus peaking display (with the magnified image) to highlight exactly what's sharp. At f0.95, the centre of the frame is nicely sharp, but there's a fairly noticeable fall-off towards the corners which is progressively reduced by stopping down to f2.8. The same is true of the lens's vignetting characteristics. Chromatic aberration is also an issue when shooting at the



COSINA MAKES THESE f0.95 SPEED LENSES FOR MFT CAMERAS TO MAKE UP FOR THE SMALLER SENSOR'S INHERENTLY GREATER DEPTH-OF-FIELD AND ALLOW FOR MORE SELECTIVE FOCUSING FOR CREATIVE PURPOSES.





©FINN BEALES

KEEP MOVING

You go where you want to go and capture things as they are.
Or you stay where you are and light things how you want.
These used to be the only two options a photographer had.

But the Profoto B2 presents a third option – do both.
Keep moving and shape light.

Add to that the speed, power and TTL functionality that Profoto lights are known for, and you have a flash that will take you to places beyond the ordinary.

See it in action and learn more: www.profoto.com/keepmoving



BEST PROFESSIONAL
LIGHTING SYSTEM



INNOVATIVE
IMAGING PRODUCT
OF THE YEAR
**PROFOTO
B2 250 AIR TTL**

Contact your local Australian partner

NSW
L&P Digital Photographic
Ph: (02) 9906 2733

NSW
Silverpixel
Ph: (02) 9565 5422

NSW
Georges Cameras
Ph: (02) 9299 2323

QLD
CameraPro Pty Ltd
Ph: (07) 3333 2900

VIC
Specular Pty Ltd
Ph: (03) 9091 2111

VIC
Michaels
Ph: (03) 9672 2222

WA
Camera Electronic
Ph: (08) 9328 4405

SA
Photographic Wholesalers
Ph: (08) 8223 6777

Profoto®
The Light Shaping Company™

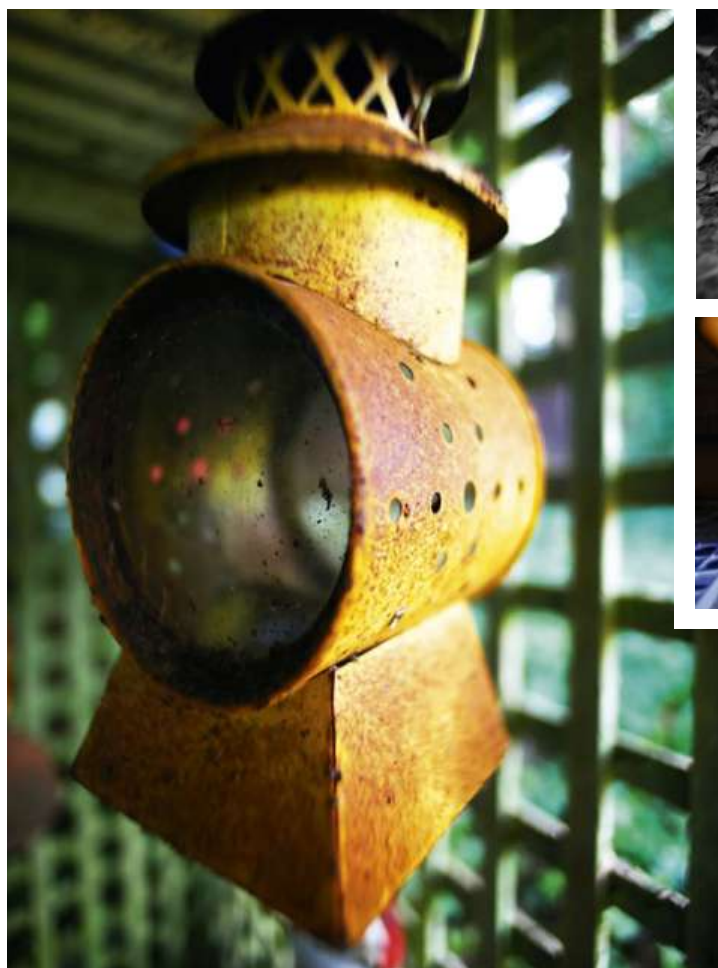
www.profoto.com/offcameraflash



TOP TECH TITLES
DIGITAL ISSUES, ONLINE NEWS,
REVIEW UPDATES & MORE
AT AVHUB.COM.AU

WIDE ANGLE LENSES

ON TRIAL



become a powerful narrative tool while preserving the atmosphere of the prevailing lighting. It's also a joyous thing to use; reassuringly weighty in the hand, but also deliciously smooth, returning the proper emphasis to focusing manually and taking charge of exposure control. It's reassuring that such as lens can still made in this era of digitally-generated notions of perfection. 📷

maximum aperture and, there's no possibility of in-camera correction, you'll have to deal with it in post-production... or again stop down, although going to just f1.4 will help reduce it a little. As with its 17.5mm Nokton cousin, this isn't a flat field lens which is most noticeable when focusing at or near infinity (i.e. with distant subjects) when selective areas closer to the edges of the image exhibit a small reduction in sharpness. Slight barrel-type distortion is evident, but only if any straight lines in the scene are located immediately adjacent to the image frames, otherwise it's not noticeable at all.

Sometimes, however, a lens design isn't all about technical perfections and instead it's about more creative aspects so it's fair to say that most photographers shooting at f0.95 aren't really going to be worrying about MFT charts. It's all about the look... in a moody music venue, dimly-lit street or a characterful wine bar. Here the Nokton 10.5mm is right at home, allowing for selective focus to



THE VERDICT

The reputation of Olympus's OM 35mm SLR system was based as much on the superlative performance of its Zuiko lenses as it was on fine cameras like the OM-3 and OM-4, and history is repeating with the PRO series M.Zuiko Digital models. Both the 8mm fisheye and 7-14mm zoom are exceptional pieces of optical engineering which deliver superb results. If you're not all ready seduced by the brilliant OM-D bodies, the growing system of PRO lenses is an equally compelling reason to

consider the MFT format. In purely practical terms, you'd pick the zoom over the fisheye, but photography is as much about emotion and vision as it is about the technicalities which is why the Voigtlander Nokton 10.5mm f0.95 is such a wonderful thing, warts and all. This lens is more about the picture than the process, and there's a 'real worldliness' in the way it renders a subject, transcending mere recording by conveying a sense of presence and involvement. Forget any analysis, just enjoy it.



LEICA S

Why settle for less?

NEW

A camera is only as good as the system that supports it. The Leica S-System combines the superior imaging qualities of medium format with the world's best lenses and the convenient handling, mobility, and high speed of a 35 mm single-lens reflex. Now the Leica S (Type 007) enters an entirely new dimension:

- Faster sequential shooting with 3.5 frames per second for even more spontaneity
- Superior imaging quality up to ISO 12 500 for greater creative freedom in low light
- Extremely fast and precise autofocus to ensure it's sharp where you need it
- Movie mode in full-HD or 4K resolution for professional cinema quality in medium-format look

LEICA. DAS WESENTLICHE.



AEE

AEE SHOTBOX S71 UHD ACTIONCAM

REPORT BY PAUL BURROWS



GO GETTER

Newcomer ShotBox joins the increasingly competitive video actioncam market with a well-priced camera capable of recording 4K video and 16 MP JPEG stills.

When you're the market leader, everybody wants to beat you and so, in the video actioncam business, GoPro is squarely in the gunsights of a growing phalanx of rivals which includes mainstream brands such as Panasonic and Sony and a host of lesser known names, quite a few of them coming from China.

Thanks mostly to GoPro, the actioncam market is now very big business indeed, greater in value in some regions than the sales of conventional video camcorders. The challenge for the competition is that GoPro had the business pretty much all to itself for a very long time... long enough to become 'standard issue' in professional film and TV production... long enough to establish widespread support among third-party accessory suppliers... long enough, in fact, to virtually become a generic term for the video actioncam. Watch any TV documentary made over the last few years and you'll inevitably not only see footage shot with a GoPro, but more than likely the cameras themselves attached to anything that can move, either human or mechanical.

So to have any chance against GoPro, you have to do it better and, preferably, at a lower price. Enter ShotBox with its flagship S71 – built by Chinese company, AEE International – which headlines a long feature list with the ability to shoot 4K video, making it a direct competitor to GoPro's Hero4 Black Edition. There's around a \$250 price difference – in the S71's favour – so ShotBox is off to a good start, but it also seems AEE has looked at every key Hero4 specification and then either matched it or gone at least one better.

For example, the Hero4 packs 12 megapixels resolution, the S71 gives you 16 MP and excellent 4608x3456 pixels JPEGs. The Hero4's underwater housing is rated to 40 metres, the S71's down to 100 metres (OK, a bit academic if you aren't a proficient diver, but you get the idea). The S71 is marginally more compact and lighter, while its higher-capacity battery pack allows for up to 2.5 hours of continuous recording (at the 1080p resolution) versus 1.5 hours for the GoPro, although there are numerous variations in the operating situations that actual direct comparisons aren't all that relevant.

It's not all one-way traffic though, particularly if you're planning to record 4K video. Here the Hero4 offers the more practical options of recording at the Ultra HD resolution (3840x2160 pixels) at 24, 25 or 30 fps versus only 12.5 fps (PAL standard) with the S71. And while the ShotBox camera also enables shooting at the 4K Cinema resolution of 4096x2160 pixels, it's only at 12 fps.

Additionally, the GoPro has a selection of white balance settings (albeit small), a choice of two colour profiles, sharpness controls and adjustable auto ISO limits. The S71 shares the Hero4's exposure compensation range of +/-2.0 EV and the option of switching to spot metering in strongly backlit situations, but otherwise it's automatic controls all the way... no bad thing if they do a good job, but more experienced shooters often like having a few overrides available for fine-tuning settings.

OUT OF THE BOX

The ShotBox S71 arrives in elaborate GoPro-style packaging which initially always looks like overkill

except that in this case, the camera is accompanied by a veritable candy store of accessories.

Of course, there's the waterproof housing – as well made as anything from GoPro – but also a very nifty little detachable LCD monitor screen which, believe it or not, has touch controls. If you want to have both the camera and monitor in the underwater casing, there's a deeper interchangeable back cover to accommodate the latter. Then there's a total of six different camera mounts, a USB cable, an anti-fog kit, a small (very) handstrap and a storage pouch. ShotBox reckons this little lot is worth around \$200 which further enhances the S71's value for money.

The camera itself is tiny, but still incorporates a monochrome info display which is how you drive the S71 if you're not using the detachable monitor unit. Almost half the camera's bulk is created by

the 1500 mAh lithium-ion battery pack which is recharged in-situ via the USB cable. On the front panel is a set of four switches for power on/off, WiFi on/off, the metering modes and a handy feature called the 'G-Sensor' which, when activated, automatically starts recording when camera movement is detected and then stops it when it becomes stationary again. Otherwise, recording is commenced manually via a green button on the S71's front panel and stopped via a red button on the top panel. There's a separate shutter button so, particularly with the touchscreen monitor attached, the ShotBox is more user-friendly as a still camera than any other actioncam (albeit with some control issues we'll get to shortly).

SWEET SIXTEEN

As noted earlier, The S71 delivers 16 MP resolution JPEGs – putting it on a par with many Micro Four

Thirds cameras – but there's the option of capturing at either 12 MP or 8.0 MP, and with continuous shooting speeds of 3.0, 6.0 or 10 fps. The sensor is a 1/2.3-inch Sony-sourced 'Exmor R' CMOS which has 'back-illuminated' design to maximise pixel size and sensitivity. It's mated with a 2.7mm f2.8 ultra-wide lens which equates to an effective focal length (in 35mm format terms) of around 15mm. There's a 10x digital zoom – operated via plus/minus soft buttons in the touchscreen monitor – but obviously this progressively crops the image. That said, with 16 MP on tap, there's a bit of room to move here, at least to about 8.0 MP.

In addition to the 4K video modes, the S71 records 1080p video at 24, 25, 48 or 50 fps, and 720p at 50 or 100 fps, the latter for slow-mo sequences. There's also a mode for 960p HD recording in the 4:3 aspect ratio. The built-in mic records stereo sound, and the



THE SHOTBOX S71 ARRIVES IN ELABORATE GOPRO-STYLE PACKAGING WHICH INITIALLY ALWAYS LOOKS LIKE OVERKILL EXCEPT THAT IN THIS CASE, THE CAMERA IS ACCOMPANIED BY A VERITABLE CANDY STORE OF ACCESSORIES.



X img_2445.jpg@100%(RGB/8#)





An AEE App is available both for iOS and Android devices and allows full adjustment of functions as per the monitor module.

By itself, the ShotBox 71 is truly tiny – but it can shoot 4K video and 16 MP JPEGs.



camera also has a built-in speaker. The memory card slot (for microSD devices) and the connection terminals (for USB and HDMI) share the same bay on one side of the camera which is protected by a tethered cover.

BUTTONED DOWN

Operationally, there are a few idiosyncrasies, starting with those separate buttons for starting and

stopping video recording. The first is also used to change the shooting mode which requires it be held down for three seconds... and then the second button cycles through the various options which include time-lapse recording. If the monitor screen is attached, the front button cycles through the video modes only while the shutter button is used to select the still photography mode (again by being held down

for a short period). This feels a bit counter intuitive at first, but when the S71 is in video mode, a casual press of the shutter button won't do anything. Additionally, the adjustments for video shooting – made via the touchscreen controls – are locked out when the camera is in still mode and vice-versa. We've seen better designed user interfaces, but it becomes less clunky with regular usage.

The touchscreen menus are icon-based and this is all pretty straightforward with audible signals confirming each action.

A particularly well thought-out aspect of the controls is making the two top-panel buttons also work as a power switch (when pressed together) so the S71 can still be turned on and off when it's in the underwater housing. Additionally, you can also still switch between the video and still shooting modes and a top panel window allows the info display to be read.

PERFORMANCE

Given the lens's ultra-wide 147 degrees angle-of-view, some curvilinear distortion is to be expected despite the use of aspherical elements. It can be minimised by keeping the S71 parallel to the image plane, but if you're shooting action up-close-and-personal, the wide view adds to the dynamism and a bit of distortion doesn't matter. The lens is nicely sharp with, not surprisingly, lots of depth-of-field even at f2.8. The lens speed also contributes to the S71's excellent low light capabilities, although it would still be nice to have some control over ISO settings. The auto colour balance control seems to do a good job and the exposure system reacts pretty quickly to changes in light levels, but extreme contrast can be an issue (which is where the spot metering comes in handy).

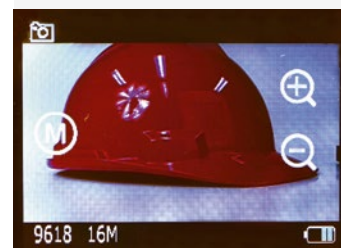
Where the waterproof housing isn't needed, the camera's smallness allows it to be tucked into tight corners and here the front-panel controls make sense in terms of accessibility. However, in reality most users are going to utilise the S71's Wi-Fi capabilities and control the camera remotely via a smartphone or tablet. The



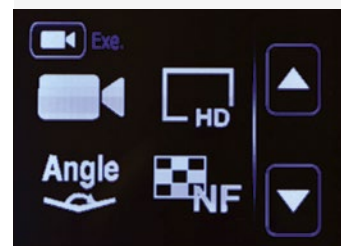
THERE'S A 10x DIGITAL ZOOM, BUT OBVIOUSLY THIS PROGRESSIVELY CROPS THE IMAGE. THAT SAID, WITH 16 MP ON TAP, THERE'S A BIT OF ROOM TO MOVE HERE, AT LEAST TO ABOUT 8.0 MP.

AEE App is available for both iOS and Android devices and the control interface gives access to everything that's adjustable from the monitor module (and including shutter release)... but you'll need to preset the metering mode and 'G-Sensor' switches which you'll also have to do before the camera is used in the housing.

Additionally to the protection against dust and moisture, ShotBox says the S71 is also able to work in subzero temperatures down to -10 degrees Celsius.



The 'M' soft key in the touchscreen accesses the main menu. Plus/minus buttons operate the digital zoom.



The main menu is icon-based with up/down soft keys for navigation.



The waterproof housing comes as standard and is exceptionally well made. It enables the S71 to be taken down to depths of up to 100 metres.

Top window enables the camera's info screen to still be read.



Housing incorporates a pressure equalisation valve to prevent pressure differences causing moisture to be sucked in.

The video performance is the clincher with test footage shot at 1080/50p being nicely stable with great clarity, colour and contrast. This is what most people will be buying the S71 for, so the fact that it also delivers pretty decent

IF YOU'RE TAKING YOUR PHOTOGRAPHY TO EXTREMES, THERE'S A LOT TO COMMEND THE S71, PARTICULARLY IN TERMS OF THE MOBILE MOUNTING OPTIONS.

stills is a real bonus as this is often a second thought with these products. It easily out-toughs the ruggedised compact cameras such as Olympus's Stylus TG-4 which has a similar sensor – and is virtually the same price (if you shop around) – but obviously the latter offers much more control for still photography plus the flexibility of a 4x zoom lens. Nevertheless, if you're taking your photography to extremes, there's a lot to commend the S71, particularly in terms of the mobile mounting options. If space is tight, run it without the monitor module in the standard waterproof housing configuration... alternatively, when you want or need a viewfinder, fit the monitor and use the dedicated back cover on the housing (they simply clip on and off). It's nice to have the choice.

THE VERDICT

For many photographers a GoPro is just a bit too pricey to buy just

for 'playing around', and while the ShotBox S71 is definitely much more than a toy, it's the perfect place to start trying out shooting in situations beyond the scope of a conventional camera. It works well simply as a stills camera, but inevitably you'll want to start shooting video and then it really comes into its own as an actioncam... with 4K on offer if you want to get really serious. Incidentally, if you don't want 4K, the virtually identical S60 model is yours for just \$299.

We'd like to see a few more manual controls (particularly for ISO and colour balance), but the automatic systems are more than capable and, let's face it, if the action is exciting enough, the odd technical hiccup isn't going to be noticed.

Obviously for the more experienced video shooter, the S71 represents exceptional value especially if you're contemplating buying a number of them for multi-camera set-ups.

In the end we got pretty addicted to what was possible with the ShotBox S71, how much fun you can have with it, and the fact that it was ready for anything straight out of the box. That you also end up with some great-looking footage (or stills) is the icing on the cake. Go on, you know you want to. 📸

VITAL STATISTICS

AEE SHOTBOX S71 \$439

Type: Compact 4K and Full HD video actioncam with stills capture function.

Lens: 2.7mm f2.8 (15.2 mm equivalent in 35mm). Six elements optical construction including aspherical types. 10x digital zoom.

Focusing: Fixed range (distances not quoted).

Sensor: 16.35 million pixels (effective) 'Exmor R' back-illuminated CMOS with 6.16x4.62 mm imaging area.

Still Capture: 4608x3456, 4000x3000 or 3200x2400 pixels with continuous shooting at 3.0, 6.0 or 10.0 fps.

Video Recording: Cinema 4K = 4096x2160 pixels at 12 fps progressive scan and 17:9 aspect ratio. Ultra HD 4K = 3840x2160 pixels at 12.5 fps progressive scan and 16:9 aspect ratio. Cinema 2.7K = 2704x1440 pixels at 24 fps progressive scan and 17:9 aspect ratio. 2.7K = 2704x1524 pixels at 25 fps progressive scan and 16:9 aspect ratio. Full HD = 1920x1080 pixels at 24, 25, 48 or 50 fps progressive scan and 16:9 aspect ratio. HD = 1280x960 pixels at 48 or 50 fps progressive scan and 4:3 aspect ratio; 1280x720 pixels at 50 or 100 fps progressive scan and 16:9 aspect ratio. MP4 format with MPEG 4 AVC/H.264 compression. Stereo sound recording. Switchable between PAL and NTSC TV standards.

Recording Media: microSD/HC/XC memory cards, up to 64 GB. Minimum Class 10 speed required (UHS Speed Class 3 for 4K recording).

Interfaces: miniUSB 2.0, micro HDMI (Type D).

Features: Detachable 5.0 cm TFT LCD touchscreen monitor, waterproof housing (for depths down to 100 metres), electronic image stabilisation, 'G-Sensor' auto recording trigger, audible signals, time lapse recording (0.5, 1, 2, 5, 10 or 30 seconds intervals), video loop recording, wide/spot metering modes, +/-2.0 EV exposure compensation, built-in loudspeaker, built-in WiFi transmitter, tripod mount. USB cable, a range of camera mounts, carry pouch and anti-fog kit supplied. Optional remote controller available.

Power: One 3.7 volt, 1500 mAh rechargeable lithium-ion battery pack (DS-S50 type). Recharged in-camera via USB port.

Dimensions (WxHxD): 43.0x59.0x47.0 mm (with monitor screen).

Weight: 116 grams (with battery pack and monitor screen).

Price: \$439.

Information: Visit www.shotbox.net.au



Photograph by Peter Eastway, G.M. Photog.

Tools transform. Artistry remains.

The Cintiq® 27QHD and Cintiq® 27QHD Touch creative pen displays set a new standard in colour, resolution and productivity. The Cintiq® 27QHD displays 1.07 billion colours and a full 97% Adobe® RGB colour gamut and therefore is the creative tool of choice when it comes to any high-end creative production in art, design, image editing, or media from print to 3D animation.

For more information visit www.wacom.com



CINTIQ®
27QHD **Creative** Pen & Touch Display


wacom®

MOUNTING UP NEW LIFE FOR OLD LENSES



▲ The RF Rokker 250mm fitted with a Novoflex Minolta MD to Micro Four Thirds lens mount adapter.

The huge choice of lens mount adapters has opened up a whole world of possibilities when it comes to the optics you can fit to your D-SLR or CSC body. Paul Burrows explores just one of them.

If you read my 'Comment' piece in the last issue, you'll remember I noted how the availability of lens mount adapters in just about every conceivable permutation of fittings is changing the way we think about selecting and using interchangeable lenses. For a long time we were locked into a mount, not just in financial terms but also psychologically. What do I mean by the latter? Well, as automatic

exposure control and autofocus were being developed, they were considered all-important capabilities. Both Canon and Nikon, for example, went as far as completely changing their mounts to accommodate the need for increased communication between the camera body and the lens. Nikon has managed to stick with its original F mount, but has made numerous changes along the way, resulting in a range of compatibility

issues. Now, in the digital era, lenses incorporate even more powerful microprocessors and the interface with a camera body – either reflex or mirrorless – is extremely sophisticated enabling, for instance, automatic corrections for things like distortion, vignetting and chromatic aberrations.

The mirrorless 'revolution' has also produced new and dedicated lens mounts, most notably Micro Four Thirds (adopted by Olympus and Panasonic), Fujifilm's X, Sony's E and FE, and Samsung's NX. But with the reflex mirror gone, something else happened... the resulting reduction in the flange back distance (or flange focal

distance) made it possible to fit a variety of 35mm SLR, D-SLR and even 35mm rangefinder lenses via mount adapters.

In fact, as many mirrorless camera systems launched with just a couple of lenses, the practice of using lens mount adapters was actively encouraged in order to give users immediate access to a wider variety of lenses. A number of manufacturers even went to the lengths of providing adapters themselves – Fujifilm for Leica M, Panasonic for Leica M and R, Olympus for its own OM mount and Samsung for Pentax K, to name just a few. The genie was out of the bottle.

Back In Control

The second key factor here was the addition of video recording capabilities to what were primarily still cameras... coincidentally, happening at roughly the same time that mirrorless cameras arrived. Again the theory was a little ahead of the practice so, for instance, continuous autofocus operations when shooting video were (and still can be) often less than satisfactory, so using manual

“

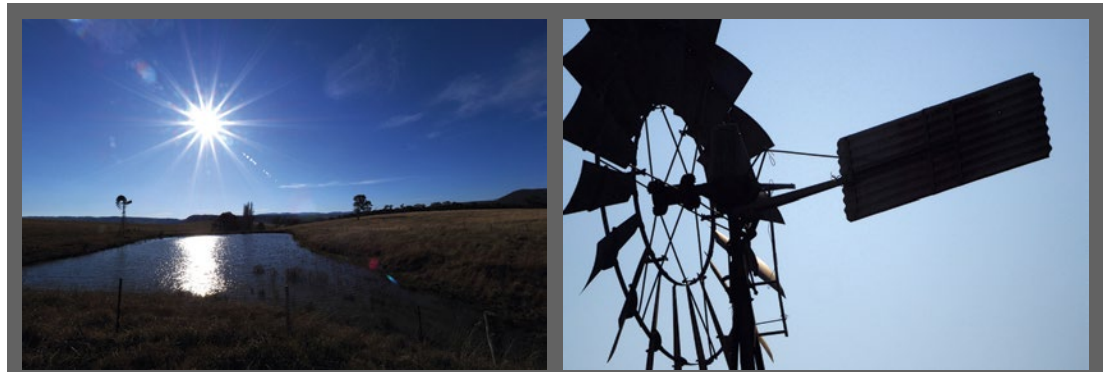
With the reflex mirror gone, something else happened... it became possible to fit a wide variety of 35mm SLR, D-SLR and even 35mm rangefinder lenses via mount adapters.

focus was advised. We did and found that it didn't really hurt... neither did using fully manual exposure control.

As it happens, manual lens control – focusing and diaphragm – is a common practice in the video world, so it didn't matter if using a mount adapter prevented automatic operations. Now manual focus lenses with manually-set aperture collars are back in fashion... who'd have thought it?

The so-called 'passive' adaptor is essentially a metal ring in exactly the right length to permit focusing

▼ The diminutive RF Rokker 250mm f5.6 mirror lens seen alongside the AF-S DX Nikkor 18-55mm f3.5-5.6 VR II collapsible zoom for size comparison.



▲ The image at left is shot with the Olympus M.Zuiko Digital 7-14mm f2.8 PRO lens at 8mm (i.e. an effective focal length of 16mm). The image at right is shot with the RF Rokker 250mm f5.6 (i.e. 500mm effectively).

▼ The distinctive doughnut-shaped out-of-focus effects – accentuated here on the sun's reflections off water – are a visual characteristic of mirror lenses and created by the main mirror's aperture.



to infinity with the necessary bayonet fittings at either end. Consequently, they attach the lens to the camera body and that's it – so, for example, you're back to the days of stop-down metering – but they're comparatively inexpensive

and companies such as Novoflex offer a huge choice of possible combinations. However, 'active' adapters are available – most notably from the US company Metabones – and these incorporate the electronic contacts needed to maintain autofocus (in some cases with some limitations) and auto aperture control. Its Speed Booster models also include optics to reduce the lens magnification factor when fitting a 35mm format lens to, say, an 'APS-C' format mirrorless camera. As an example, the converter which enables Canon EF lenses to be fitted to Fujifilm X Mount cameras incorporates a five elements/four group optical construction which reduces the normal focal length magnification from 1.5 to a much less significant

1.07x. These optics also give an increase in lens speed... for example, from f2.8 to f2.0. The version for fitting to Micro Four Thirds cameras (which doesn't support AF) reduces the focal length magnification factor here from 2.0x to just under 1.3x.

While these devices are fairly expensive, if you have a nice set of Canon EF lenses that you'd like to go on using on your new Fujifilm X-T1, it's a pretty small price to pay for an almost 'seamless' adaption. And a complete lens system changeover could potentially be many, many times more costly.

Mirror, Mirror.

Being able to keep using a favourite lens or, indeed, revive one that's been redundant for a while is the



▲ While many mount adaptors are passive, the Metabones models incorporate electronic contacts to maintain autofocus (in some cases with some limitations) and auto aperture control.

ideal scenario for using a mount adapter. In my case, it's a lens I just haven't been able to part with despite not using the system it came from for a couple of decades.

The RF Rokker 250mm f5.6 is a mirror lens with a Minolta MD mount. Mirror lenses have enjoyed various brief bursts of popularity particularly during the 1970s and '80s, but they've never really caught on, perhaps because the design does involve some compromises. However, they're still being made, albeit only by a couple of manufacturers, such as South Korea's Samyang (also sold under a number of other brand names) and Vivitar. Most interestingly, Tokina recently introduced a 300mm f6.3 mirror lens in the Micro Four Thirds mount (so it has an effective focal length of 600mm). Sigma, Tamron, Zeiss (for Contax) and Nikon, among others, have all built mirror lenses in the past.

As the name suggests, a mirror lens – also called a reflex lens – incorporates mirrors which replace conventional elements and, essentially, by reflecting the

light rays back and forth inside the barrel, they 'fold up' the focal length. Hence you can have a comparatively long focal length – i.e. a telephoto lens – packed into a very short barrel and, as there's only two mirrors versus a much greater number of elements, these lenses are also very lightweight in comparison to a conventional design. The downsides are that it's impossible to provide autofocus or incorporate a diaphragm so you're limited to a fixed aperture. Consequently, a passive mount adapter is all you need.

Despite having a long focal length of 250mm, the RF Rokker is the same size as many kit

**“
Now manual
focus lenses with
manually-set
aperture collars
are back in
fashion... who'd
have thought it?**

zooms in the 18-55mm range and it weighs a mere 260 grams, less if you unscrew the metal lens hood (which also makes it shorter yet again). And it has pretty much an all-metal barrel construction. Specifically, this lens is actually a *catadioptric* design so it employs a combination of curved mirrors and a small number of lens elements... in this case six, arranged in five groups.

Doing the research for this article, I've found out that it's actually quite rare and now fetching prices of up to US\$1000 on eBay, but the reason that I've held onto it was mainly that 250mm was an unusual focal length (most 'cats' were or are 300mm, 500mm or 1000mm) and, subsequently, it was truly tiny for a telephoto. This is what is making it highly sought after now. It takes 62 mm diameter screwthread filters which also gives you some idea of its smallness.

The front of the lens rotates during focusing so, alternatively, 39 mm filters can be fitted at the rear.

Its size makes the RF Rokker 250mm perfectly suited for use on a mirrorless body and, depending on the sensor format, the effective focal length is even longer. So, in the case of an MFT camera, it becomes a 500mm... yep, a 500mm supertelephoto that's just 70 mm in length (with only a slight extension to 85 mm when at its minimum focusing distance of 2.5 metres).

The Novoflex MD-to-MFT adapter that I've bought adds a little extra length to the overall package, but even on the diminutive Olympus OM-D E-M10, the RF Rokker 250mm looks perfectly at home and the handling is very well balanced. The fixed aperture is less of an issue when using Auto ISO and now that modern sensors perform well at much higher sensitivity settings... well beyond what was available with colour film.

Little Wonder

Overall too, the 250mm performs well with good sharpness and

contrast, minimal vignetting, very little distortion and virtually no chromatic aberrations (because there are so few conventional elements). Strong backlighting is any mirror lens's Achilles Heel and contrast is significantly reduced in these situations, but on the plus side there's neither flare nor ghosting (again because there are so few elements).

However, the shape of the main mirror actually produces a distinctive doughnut-shaped out-of-focus effect which you either love or hate, and given the inherently shallow depth-of-field – which you really can't do anything about given the fixed aperture – they're always present. They can be quite distracting in a background so it's a case of composing and framing to minimise the effect, looking for plainer or more uniformly-toned backdrops, or trying to use it more creatively.

And because the lens is so compact, it's easy to forget that camera shake is quite a big issue at 250mm and even more so with an effective 375mm or 500mm, particularly if the camera you're using doesn't have sensor-shift image stabilisation. The E-M10 doesn't have the fancier five-axis image stabilisation of its OM-D siblings, but I was still able to hand-hold the 250mm at shutter speeds as slow as 1/30 second without any problems. Without stabilisation, 1/125 second is probably as low as you can go safely (which is why Auto ISO control is a godsend with this lens).

These operational considerations aside, the RF Rokker 250mm f5.6 is a little gem, but it actually packs a big punch in focal length terms. It's got a new lease on life courtesy of the Novoflex adapter and I'm now really pleased that I've kept it for all these years despite having nothing to put it on (well, it didn't take up much storage space). There's a lesson in there somewhere. (No, there really is a difference between hoarding and collecting, honest.) 🐼



Japan's number one filter brand



Kenko. Opening the world of imagination.

Beautiful images and exquisite craftsmanship are highly valued in Japanese culture. So it's no surprise that more Japanese photographers choose Kenko filters than any other brand. Kenko Tokina Co. Ltd is Japan's largest photographic accessory maker. For decades, we have adhered to a tradition of excellence in craft and technology. Our filters help photographers all over the world in their creation of beautiful images.

Kenko Filters are available from the following leading photographic retail stores:



For more information please visit crkennedy.com.au



2015 FUJIFILM SHOWCASE – GRAND PRIZE WINNER!

Congratulations to all of you who made it into print this year, especially each of the round winners. Once again the standard entries of has been very high and, as well as our regular competitors, this year there were a lot of newcomers which added to the variety of submissions as well as the level of competition.

Perhaps not surprisingly (since he won three of this year's rounds), regular Greg Hanlon was once again judged as the overall

winner for 2015. The winning image is from the third round – published in the March/April 2015 issue – and another great example of Greg's eye for a dramatic landscape. The location is Snowdonia National Park in north Wales and Greg used a Pentax 645Z fitted with a 55mm prime lens.

Once again, many thanks to Fujifilm Australia for its long-term and ongoing support of the Showcase competition.

DO YOU WANT TO WIN?

Fujifilm Australia generously supplies the prizes for each issue's successful entrants to the Showcase. Entrants have the choice of specifying either film or a memory card (please specify on the entry coupon or indicate your preference if entering via email). The grand prize is a Fujifilm FinePix S4200 digital camera (or the equivalent should it be replaced in the meantime) which has a 14 megapixels CCD sensor and a 30x optical zoom equivalent to 24-720mm.

Note that it is not a requirement that entries to the Fujifilm Showcase be taken on

Fujifilm camera equipment, either film or digital. However, film-based photographs must be originally taken on Fujifilm products. In the case of winning images that are submitted as prints, proof may be required (i.e. by supplying the original negative).

FUJIFILM SHOWCASE 2016

The 2016 Fujifilm Showcase closes on 30 September 2016. Entries received after this date will be automatically entered in the 2017 competition which starts with the November/December 2016 issue. The overall winner of the

2016 competition will be announced in the same issue. You can enter the Fujifilm Showcase as many times as you like during the year, up to four photographs each time. Please make sure you provide all the necessary camera and film/capture details on the entry coupon (which can be copied if you don't want to cut up your magazine). All entries must be accompanied by a fully completed entry coupon.

Why not have a go? Not only can you win some great prizes, but it's also a chance to see one of your pictures in print. Read the accompanying rules carefully and get snapping.

2016 FUJIFILM SHOWCASE First Round Winners



WINNER

One of the skills of photography is spotting a picture where most people wouldn't see anything. Paul Watson saw this colourful composition after his daughter's painting session. The framing makes the maximum use of the bright colours and shapes. Paul used a Nikon DF fitted with a Sigma 24-105mm zoom.



HIGHLY COMMENDED

A light tent, a pair of studio lights and a coloured card for the background, enabled Kevin Thomas to capture this great study of a model warrior and show off some excellent macro photography techniques in the process. Kevin used a Canon EOS 1100D fitted with a Canon EFS 60mm f2.8 macro lens which was focused manually.

ENTRY GUIDELINES FOR DIGITAL IMAGES

You can enter digital images into the Fujifilm Showcase; files can be supplied on CD or via email to **cameracomp@avhub.com.au**. The requirements for submitting digital files are as follows:

- 300 dpi resolution, and at a file size which enables a reproduction of up to 20x15 cm. Please avoid submitting overly large file sizes, especially when emailing the images. Up to 4.0 MB in file size is more than sufficient.
- Digital retouching and manipulation is permitted, but the judges will continue to reward good camera techniques.
- The full details of the camera, lens and any retouching must be supplied with the image. Images can be titled if you wish, but this isn't essential. Please make sure your CDs or DVDs are marked with your name and address.
- Up to four images may be permitted per entry.
- Please include an SAE if you would like your CD or DVD returned.
- Prizes are now limited to SecureDigital (SD) cards and, for a limited time, 35mm film.

FUJIFILM SHOWCASE

Tell us how you did it! When you enter the Fujifilm Showcase competition, remember to explain any tips and techniques you used to achieve the result. Also, let us know the type of camera and film.

1.TITLE

CAMERA

LENS

2.TITLE

CAMERA

LENS

3.TITLE

CAMERA

LENS

4.TITLE

CAMERA

LENS

NAME

ADDRESS

STATE

POSTCODE

TELEPHONE

☐ Please return entries. Self-addressed postage and packaging is included.

☐ I do not want my entries returned.

Should you be successful, please nominate your prize preference (tick the appropriate box)

Preferred prize format:

☐ SecureDigital

☐ 35mm film

Post your entry to: Fujifilm Showcase, Camera Magazine, Locked Bag 5555, St Leonards, NSW 1590

DIGITAL SLR CAMERAS BUYER'S CHECK LIST NOVEMBER/DECEMBER 2015

THIS CHECKLIST is designed to allow direct comparisons between different camera models, here listed in price order within each brand. The published prices are mostly supplied by the distributors as recommended retail prices (RRPs). However, some distributors are no longer supplying RRP's to the media so it has become necessary to determine an

'estimated street price' derived from the range of prices for a model published by retailers. Where this has been necessary, the letter 'E' appears at the start of the entry.

A dot appearing in a column indicates that the feature is available on the camera model listed. Where a specification or product detail hasn't yet been published

or confirmed, the letters TBA (to be announced) or TBC (to be confirmed) are used. If a feature is irrelevant to a particular model – such as mirror lock-up for compact system cameras – then n/a (not applicable) is used. Every effort is made to ensure accuracy; please send any corrections to camera@avhub.com.au

			Sensor Size	Sensor Type	File Formats	Memory Cards						Exposure Modes					Features																		
	Model	Price (Body Only Unless Noted With Asterisk*)	Megapixels (Total)	APS/DX 35mm	Four Thirds	CCD	CMOS	Foveon	RAW	TIFF	JPEG	Memory Stick Compact Flash	SD/SDHC/SDXC * = microSD	Continuous Shooting Speed (fps)	Resolution	Burst Length (U=Unlimited) Max. Resolution	Autofocus Points	Metering Zones	Program	Subject Programs	Aperture Priority	Shutter Priority	Manual	Shutter Speeds	Built-In Flash	Anti-Dust	HD Video	Mirror Lock-Up	Anti-Shake In Body	Wireless Transmitter/WiFi	Live View	Weather Proofing	Monitor Size (cm)	Weight (Body Only)	Review Issue
E	Canon EOS 1200D*	\$449	18.7	•			•	•	•		•		•	3	100	9	63	•	•	•	•	•	•	30-1/4000	•	•	•	•			•		7.62	450	
E	Canon EOS 100D*	\$699	18.5	•			•	•	•		•		•	4	28	9	63	•	•	•	•	•	•	30-1/4000	•	•	•	•			•		7.7	370	Sept/Oct '13
E	Canon EOS 700D*	\$749	18.5	•			•	•	•		•		•	5	22	9	63	•	•	•	•	•	•	30-1/4000	•	•	•	•			•	•	7.7	580	Jul/Aug '13
E	Canon EOS 750D*	\$1,049	24.7	•			•	•	•		•	•	•	5	440	19	7560	•		•	•	•	•	30-1/4000		•	•	•		•	•	•	7.7	555	
E	Canon EOS 760D*	\$1,299	24.7	•			•	•	•		•	•	•	5	940	19	7560	•		•	•	•	•	30-1/4000		•	•	•		•	•	•	7.7	565	
E	Canon EOS 70D*	\$1,349	20.9	•			•	•	•		•	•	•	7	40	19	63	•		•	•	•	•	30-1/8000	•	•	•	•		•	•	•	7.7	670	Nov/Dec '13
E	Canon EOS 6D	\$1,999	20.6	•			•	•	•		•		•	4.5	1250	11	63	•		•	•	•	•	30-1/4000		•	•	•		•	•	•	7.62	690	Mar/Apr '13
E	Canon EOS 7D Mark II	\$2,149	20.9	•			•	•	•		•	•	•	10	U	65	252	•		•	•	•	•	30-1/8000	•	•	•	•		•	•	•	7.7	910	Jan/Feb '15
E	Canon EOS 5D Mark III	\$3,499	23.4	•			•	•	•		•	•	•	6	65	61	63	•		•	•	•	•	30-1/8000		•	•	•		•	•	•	8.1	860	May/June '12
E	Canon EOS 5Ds	\$4,999	53	•			•	•	•		•	•	•	5	510	61	105K	•		•	•	•	•	30-1/8000		•	•	•		•	•	•	8.7	845	Sept/Oct '15
E	Canon EOS 5DsR	\$5,399	53	•			•	•	•		•	•	•	5	510	61	105K	•		•	•	•	•	30-1/8000		•	•	•		•	•	•	8.7	845	
E	Canon EOS-1DX	\$6,899	19.3	•			•	•	•		•	•	•	12	100	61	100K	•		•	•	•	•	30-1/8000		•	•	•		•	•	•	7.62	1340	Nov/Dec '12
E	Nikon D3200*	\$549	16.9	•			•	•	•		•		•	4	100	11	420	•	•	•	•	•	•	30-1/4000	•	•	•	•		•	•	•	7.62	510	Jul/Aug '11
E	Nikon D5100*	\$590	24.7	•			•	•	•		•		•	4	100	11	420	•	•	•	•	•	•	30-1/4000	•	•	•	•		•	•	•	8.1	510	Jul/Aug '13
E	Nikon D3300*	\$599	24.7	•			•	•	•		•		•	5	TBA	11	420	•	•	•	•	•	•	30-1/4000	•	•	•	•		•	•	•	7.62	410	
E	Nikon D5200*	\$799	24.7	•			•	•	•		•		•	5	100	39	2016	•	•	•	•	•	•	30-1/4000	•	•	•	•		•	•	•	7.62	505	Jul/Aug '13
E	Nikon D5300*	\$899	24.7	•			•	•	•		•		•	5	100	39	2016	•	•	•	•	•	•	30-1/4000	•	•	•	•		•	•	•	8.1	480	
E	Nikon D5500*	\$999	24.7	•			•	•	•		•		•	5	100	39	2106	•	•	•	•	•	•	30-1/4000	•	•	•	•		•	•	•	8.1	420	Sept/Oct '15
E	Nikon D7000*	\$1,099	16.9	•			•	•	•		•		•	6	100	39	2016	•	•	•	•	•	•	30-1/8000	•	•	•	•	•	•	•	•	7.62	690	Mar/Apr '11
E	Nikon D7100*	\$1,299	24.7	•			•	•	•		•		•	6	33	51	2016	•	•	•	•	•	•	30-1/8000	•	•	•	•		•	•	•	8.1	675	Sept/Oct '13
E	Nikon D7200	\$1,449	24.7	•			•	•	•		•		•	6	100	51	2016	•	•	•	•	•	•	30-1/8000	•	•	•	•		•	•	•	8.1	675	Jul/Aug '15
E	Nikon D610	\$1,799	24.7	•			•	•	•		•		•	6	51	39	2016	•	•	•	•	•	•	30-1/8000	•	•	•	•		•	•	•	8.1	760	Mar/Apr '14
E	Nikon D750	\$2,349	24.93	•			•	•	•		•		•	6.5	TBA	51	91K	•	•	•	•	•	•	30-1/4000	•	•	•	•		•	•	•	8.1	750	May/Jun '15
E	Nikon Df	\$2,799	16.9	•			•	•	•	•	•		•	5.5	100	33	2016	•		•	•	•	•	30-1/4000		•		•		•	•	•	8.1	710	Mar/Apr '14
E	Nikon D800	\$2,999	36.8	•			•	•	•	•	•		•	4	56	51	91K	•		•	•	•	•	30-1/8000	•	•	•	•		•	•	•	8.1	900	Sept/Oct '12
E	Nikon D810	\$3,599	37.1	•			•	•	•	•	•		•	5	100	51	91K	•		•	•	•	•	30-1/8000	•	•	•	•		•	•	•	8.1	880	Sept/Oct '14
E	Nikon D810A	\$3,899	37.1	•			•	•	•	•	•		•	5	U	51	91K	•		•	•	•	•	900-1/8000	•	•	•	•		•	•	•	8.1	880	
E	Nikon D4S	\$6,899	16.6	•			•	•	•	•	•		•	11	200	51	91K	•		•	•	•	•	30-1/8000		•	•	•		•	•	•	8.1	1180	Nov/Dec '14
E	Nikon D3X	\$9,199	25.7	•			•	•	•	•	•		•	5	130	51	1005	•		•	•	•	•	30-1/8000				•		•	•	•	7.62	1220	Mar/Apr '09
	Pentax K-S1	\$749	20.42	•			•	•	•		•		•	5.4	20	11	77	•	•	•	•	•	•	30-1/6000	•	•	•	•	•	•	•	•	7.62	499	
	Pentax K-50*	\$899	16.5	•			•	•	•		•		•	6	30	11	77	•	•	•	•	•	•	30-1/6000	•	•	•	•	•	•	•	•	7.62	590	Mar/Apr '14
	Pentax K-S2	\$925	20.42	•			•	•	•		•		•	5.5	30	11	77	•	•	•	•	•	•	30-1/6000	•	•	•	•	•	•	•	•	7.62	618	Nov/Dec '15
	Pentax K-3 II	\$1,349	24.7	•			•	•	•		•		•	8.3	60	27	86K	•		•	•	•	•	30-1/8000	•	•	•	•	•	•	•	•	8.1	700	
	Pentax K-3*	\$1,599	24.7	•			•	•	•		•		•	8.3	60	27	86K	•		•	•	•	•	30-1/8000	•	•	•	•	•	•	•	•	7.62	715	Jul/Aug '14
	Sony SLT-A58*	\$699	20.4	•			•	•	•		•	•	•	5	7	15	1200	•	•	•	•	•	•	30-1/4000	•	•	•	n/a	•	•	•	•	6.9	492	
	Sony SLT-A65*	\$1,099	24.7	•			•	•	•		•	•	•	8	13	15	1200	•	•	•	•	•	•	30-1/4000	•	•	•	n/a	•	•	•	•	7.62	622	May/June '12
	Sony ILCA-77 II	\$1,499	24.7	•			•	•	•		•	•	•	12	60	79	1200	•	•	•	•	•	•	30-1/8000		•	•	n/a	•	•	•	•	7.62	647	
	Sony SLT-A99	\$2,999	24.7	•			•	•	•		•	•	•	6	15	19	1200	•	•	•	•	•	•	30-1/8000		•	•	n/a	•	•	•	•	7.62	733	Nov/Dec '12
	Sony ILCA-77 II	\$1,499	24.7	•			•	•	•		•	•	•	12	60	79	1200	•	•	•	•	•	•	30-1/8000		•	•	n/a	•	•	•	•	7.62	647	
	Sony SLT-A99	\$2,999	24.7	•			•	•	•		•	•	•	6	15	19	1200	•	•	•	•	•	•	30-1/8000		•	•	n/a	•	•	•	•	7.62	733	Nov/Dec '12

For more information please visit:
www.fujifilm-x.com



Follow us on Facebook
www.facebook.com/fujifilmcamerasaustralia

FUJIFILM

X-T10

Creativity. Every day.



Small, simple to use and offering exceptional image quality.
The X-T10 turns any trip, whether in everyday life or to the other side of
the world, into the ultimate photo opportunity.

Available from leading photographic stores and selected retailers



COMPACT SYSTEM CAMERAS BUYER'S CHECK LIST NOVEMBER/DECEMBER 2015

THIS CHECKLIST is designed to allow direct comparisons between different camera models, here listed in price order within each brand. The published prices are mostly supplied by the distributors as recommended retail prices (RRPs). However, some distributors are no longer supplying RRP's to the media so it has become necessary to determine an

'estimated street price' derived from the range of prices for a model published by retailers. Where this has been necessary, the letter 'E' appears at the start of the entry.

A dot appearing in a column indicates that the feature is available on the camera model listed. Where a specification or product detail hasn't yet been published

or confirmed, the letters TBA (to be announced) or TBC (to be confirmed) are used. If a feature is irrelevant to a particular model – such as mirror lock-up for compact system cameras – then n/a (not applicable) is used. Every effort is made to ensure accuracy; please send any corrections to camera@avhub.com.au

Model	Price (Body Only Unless Noted With Asterisk*)	Sensor Size	Sensor Type	File Formats	Memory Cards	Exposure Modes	Shutter Speeds	Features	Weight (Body Only)	Review Issue
* single lens kit ** twin lens kit										
E Canon EOS M3	\$799	24.7	•	•	•	•	•	•	7.5	350
Fujifilm X-A2*	\$699	16.5	•	•	•	•	•	•	7.62	300
Fujifilm X-A1*	\$849	16.3	•	•	•	•	•	•	7.62	300
Fujifilm X-T10*	\$1,299	16.7	•	•	•	•	•	•	7.62	331
Fujifilm X-M1*	\$1,099	16.3	•	•	•	•	•	•	7.62	280
Fujifilm X-T1	\$1,699	16.7	•	•	•	•	•	•	7.62	390
Fujifilm X-E2*	\$1,899	16.7	•	•	•	•	•	•	7.62	300
Fujifilm X-Pro1*	\$2,499	16.3	•	•	•	•	•	•	7.62	400
Hasselblad Lunar*	\$7,995	24.7	•	•	•	•	•	•	7.62	570
Leica T	\$2,300	16.5	•	•	•	•	•	•	9.4	339
E Nikon S1*	\$499	12	15.9mm	•	•	•	•	•	7.62	197
E Nikon J2*	\$549	12	15.9mm	•	•	•	•	•	7.62	238
E Nikon J3*	\$599	15.1	15.9mm	•	•	•	•	•	7.62	201
E Nikon J4*	\$699	18.4	15.9mm	•	•	•	•	•	7.62	192
E Nikon J5*	\$749	23	15.9mm	•	•	•	•	•	7.62	231
E Nikon AW1*	\$899	15.1	15.9mm	•	•	•	•	•	7.62	201
E Nikon V3*	\$999	18.4	15.9mm	•	•	•	•	•	7.62	282
Olympus E-PL5*	\$599	17.2	•	•	•	•	•	•	7.62	279
Olympus E-PL7*	\$799	17.2	•	•	•	•	•	•	7.62	279
Olympus E-P5*	\$899	17.9	•	•	•	•	•	•	7.62	373
Olympus OM-D E-M10*	\$849	17.2	•	•	•	•	•	•	7.62	350
Olympus OM-D E-M10 II*	\$999	17.2	•	•	•	•	•	•	7.62	350
Olympus OM-D E-M5 II*	\$1,299	17.2	•	•	•	•	•	•	7.62	417
Olympus OM-D E-M1*	\$1,599	17.2	•	•	•	•	•	•	7.62	350
Panasonic Lumix GF7*	\$699	16.8	•	•	•	•	•	•	7.62	236
Panasonic Lumix G6*	\$899	18.3	•	•	•	•	•	•	7.62	340
Panasonic Lumix G7*	\$999	18.3	•	•	•	•	•	•	7.62	365
Panasonic Lumix GM5*	\$1,099	16.8	•	•	•	•	•	•	7.62	211
Panasonic Lumix GX7*	\$1,149	16.8	•	•	•	•	•	•	7.62	340
Panasonic Lumix GX8*	\$1,499	21.7	•	•	•	•	•	•	7.62	435
Panasonic Lumix GH4	\$1,799	17.2	•	•	•	•	•	•	7.62	480
Pentax Q-S1	\$449	12.7	9.5mm	•	•	•	•	•	7.62	183
Pentax Q10*	\$497	12.7	9.7mm	•	•	•	•	•	7.62	180
Pentax Q*	\$599	12.7	7.5mm	•	•	•	•	•	7.62	180
Pentax Q7*	\$699	12.7	9.5mm	•	•	•	•	•	7.62	180
Ricoh GXR + P10*	\$499	10.6	7.59mm	•	•	•	•	•	7.62	367
Ricoh GXR + S10*	\$649	10.4	9.5mm	•	•	•	•	•	7.62	325
Ricoh GXR + A12*	\$799	12.9	•	•	•	•	•	•	7.62	160
Ricoh GXR + A16*	\$899	16.5	•	•	•	•	•	•	7.62	550
Samsung NX Mini*	\$499	20.9	1-inch	•	•	•	•	•	7.62	158
Samsung NX3000*	\$599	21.6	•	•	•	•	•	•	7.62	230
Samsung NX500	\$999	30.7	•	•	•	•	•	•	7.62	550
Samsung NX30*	\$1,099	21.6	•	•	•	•	•	•	7.62	375
Samsung NX1	\$1,899	30.7	•	•	•	•	•	•	7.62	550
Sony Alpha 3500*	\$599	20.4	•	•	•	•	•	•	7.62	352
Sony Alpha 5000*	\$699	20.4	•	•	•	•	•	•	7.62	210
Sony Alpha 6000	\$899	24.7	•	•	•	•	•	•	7.62	285
Sony Alpha 7	\$1,499	24.7	•	•	•	•	•	•	7.62	416
Sony Alpha 7 II	\$2,299	24.7	•	•	•	•	•	•	7.62	556
Sony Alpha 7R	\$2,899	36.8	•	•	•	•	•	•	7.62	407
Sony Alpha 7S	\$3,299	12.4	•	•	•	•	•	•	7.62	416
Sony Alpha 7S II	\$4,299	12.4	•	•	•	•	•	•	7.62	584
Sony Alpha 7R II	\$4,499	43.6	•	•	•	•	•	•	7.62	582

The moment mirrorless photography
matches your aspiration.

The new Batis lenses from ZEISS.



//NEW PRO ERA
MADE BY ZEISS



Exclusively
for the Sony
α series

ZEISS Batis 2/25 and 1.8/85 with OLED display and auto focus.

Be part of a new era of professional photography – with the ZEISS Batis lenses for mirrorless full-frame system cameras from Sony. The lens family is not only impressive on account of its outstanding image quality and innovative design but also thanks to its OLED display for ideally adjusting the depth of field. Capture unique moments – no matter if manually focused or with auto focus.

Learn more about the lenses and the new era on
www.zeiss.com/batis



We make it visible.



SAMSUNG

FIND YOUR SIGNATURE

SAMSUNG SMART CAMERA **NX1**



SAMSUNG
NX1
MIRRORLESS CAMERA

camerahouse

Diamonds 
CAMERA / VIDEO / DIGITAL / THAT'S YOUR BEST SHOT

 Digital Camera
WAREHOUSE

michaels 
...with best help